GRAIN SORGHUM MOVEMENTS FROM SOUTHWESTERN KANSAS IN RELATION TO SPATIAL PRICE DIFFERENCES

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Hosea Snyder Harkness

B. S., Kansas State College of Agriculture and Applied Science, 1957

A THESIS

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

MANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

LD 2668 T4 1958 H37 c2 Documents.

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INTRODUCTION

Importance of Grain Sorghum in Kansas Economy

Grain sorghums have increased in importance in Mansas since about 1940. This increase can be attributed to less land planted to wheat due to acreage allotments, the need for another each crop in years when wheat fails, and realisation of its importance as a feed grain. Total production has also been increased by the development of new varieties and better methods of production. The ability of grain sorghum to withstand drought gives some assurance to the producer of having a feed grain in drought years when conditions are unfavorable for corn production in the corn producing areas.

For the ten-year period of 1947-1956 Kansas farmers sold 65 percent of their grain sorghum production on the cash market. This average compares with 1955 when 63 percent was sold and 60 percent in 1956.

It was estimated that 74 percent of the 1957 Kansas crop would be sold by the producer.

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Table 1 shows the increase in Kansas farm value of grain sorghum since 1947. Grain sorghums have ranked from third to fifth in farm value of all crops from 1947-1956 and it is estimated that they were second to wheat in 1957. Corn has ranked from second to fourth during this same period. In 1954 grain sorghum ranked third to wheat and alfalfa hay while corn was fourth. By percentage comparison in Table 1 the farm value of grain sorghum as compared to the farm value of corn shows that grain sorghums have gained considerably on corn in the period 1947-1956. For the record crop of 1957

Ransas State Board of Agriculture, <u>Price Patterns</u>, p. 15.
20. S. Department of Agriculture, <u>Field and Seed Crons Ex States</u>, 1956-57, p. 16.

Table 1. Kansas farm valuet All crops, corn for grain, and grain sorghums, and percent grain sorghums are of all crops and of corn for grain 1947-1956, 10 year average, and 1957.

ear	of All Crops	of Corn for:		:Grain Sorgha a:Percent of	m:Grain Sorghum :Percent of
	t	1		:Farm Value	
	(thousands)	(4)	/Ab 2 - \	:All Crops	:Corn for Grain
1947	\$912,364	(thousands)	(thousands) \$21,429	2.3	27.1
1948			28,968	4.0	27.6
1949	730,308	104,831 77,872	30,365	5.6	39.0
				6.7	
1950	679,893	123,932	45,885		37.0 86.1
1951	618,006	89,230	76,795	12.4	
1952	944,554	71,496	29,102	3.1	40.7
1953	556,911	56,591	35,542	6.4	62.8
1954	675,012	48,651	56,298	8.3	115.7
1955	510,472	34,910	33,472	6.6	95.9
1956	513,845	31,535	30,488	5.9	96.7
0 yr.	ave.				
1947-50		71,805	38,834	5.8	54.1
19571	515,831	41,607	103,303	20.0	248.3

Preliminary estimate.
Source: Kansas State-Federal Crop Reporting Service.

it was estimated that the farm value of grain sorghum was 248.3 percent of the farm value of corn in Kansas.

With this increase in value, grain sorghums are also becoming important as a surplus crop in Kansas. Markets other than local and in the state are needed to a greater degree than before.

Purpose and Problem

Wayne M. Shirk in his thesis on Marketing Grain Sorghum in Kansas stated that, "Kansas farmers have not obtained maximum return from their sorchum grain production." Shirk concluded in his study that farmers did not get maximum returns because they sold at the wrong time of the year.

This study was to determine whether Kansas sellers were taking advantage of price differences between markets at a given point in time. A small part of a spatial equilibrium problem has been studied to see if the grain sorghum market was in equilibrium. To do this the economic theory that "under competitive conditions, the price to the producer would be the central market price less the cost of transportation services between the production location and the consuming center" was applied.²

If an equilibrium was found between the producing area and the consuming area considered, it would be indifferent as to where Kansas grain sorghum was shipped. But, it was felt that an equilibrium did not exist within the structure of the grain sorghum market. The period covered was from July 1, 1955 to December 31, 1957.

The partial spatial equilibrium used was made up of the consuming markets of Washington, California, and Kansas City. Kansas was considered part of the main producing area of grain sorghums. The study was limited to an area south of a line from Salina through Goodland, and west of a line from Salina through Wichita, since almost all movement west was from this area.

Procedure and Assumptions

Grain sorghum prices for Los Angeles, Seattle, and Kansas City, and

Wayne M. Shirk, <u>Marketing Grain Sorehum in Kansas</u>, Unpublished Master's Thesis, Kansas State College, 1956, p. 2.

Earl O. Heady, <u>Economics of Agriculture Production and Resource Use</u>, p. 642.

movements of grain sorghums to California, Washington, and Kansas City were analysed. Freight costs (f.o.b.) from Kansas to these three markets were deducted from the prices of each market. This put the prices of the markets considered on the same basic level.

Prices for Los Angeles were obtained from <u>Feedstuffs</u>, Volume 27, No. 26 through Volume 29, No. 52. These prices were listed as nominal terminal market prices and were for the latter part of each week. Los Angeles prices were considered to be representative of terminal market prices in California, since local prices in California should be reflected on the Los Angeles market.

Seattle prices were received by letter from P. L. Doctor, Agricultural Statistician, who copied the prices from the records of the Seattle Grain Exchange. These prices were Friday quotations or the closest marketing day to Friday. Seattle prices were considered to be representative of terminal market prices in Washington, since one of the largest feed manufacturers in the state, the Washington Cooperative Farmer's Association, set a price on grain sorghums which was reflected on the price at the Seattle Grain Exchange.

Kansas City prices were taken from the <u>Kansas City Grain Market Review</u>, 1955-1957, and were No. 2 nominal, Friday quotations.

Data on grain sorghum movements, which will be discussed later, were obtained from the records of the Kansas Entomological Commission. Carlot receipts in Kansas City were taken from the Kansas City Grain Market Review.

It was assumed that a very large percent of the carlot receipts in

Kansas City were from Kansas and further that these receipts came chiefly

from the area in Kansas which was covered in the final analysis of this

study. A partial basis for this assumption was from the results of a survey

¹P. L. Doctor, letter to author, March 5, 1958.

made in the summer of 1955 in which Kansas State College participated in a North Central Region Cooperative Research Project on country elevator marketing operations. It was found from this study that western Kansas was a surplus area, while large quantities were sometimes shipped in for resale locally in eastern Kansas. Southeastern Kansas country elevator managers reported that two and one-half as much grain sorghum was sold to local farmers as was locally received from producers in the area.

It was further assumed that the largest part of the carlot receipts in Kansas City remained there since it is the second largest feed manufacturing center in the United States. Based on this assumption flat freight rates to Kansas City were used in this study. If proportional rates had been used during certain periods of time a better market than Kansas City might have been located east of the Kansas City market.

The procedure used for each section will be specified in the text.

SUPPLY AND DISTRIBUTION OF GRAIN SORGHUMS

General

Table 2 shows the flow of grain sorghums in the United States as they move from producer to the consumer. This has been based on a ten-year average of 1947-1956. Eighty-three and six-tenths percent of the average total supply was determined by production while carryover contributed 16.4 percent each year.

The consumer receives his grain sorghums mainly in the form of livestock products. Small amounts of grain sorghums are used in this country for making alcohol. The exports from this country are used largely for food products by the foreign countries.

Grain sorghums: Supply and distribution, United States, 1947-1956, 10 year average, and 1957. Table 2.

Year	40	Supply				detribut	ton		: Stocks
Beginning October 1	Carry-	: Production :	Supply	Food and :	Seed :	Exports	Total Non-	: Livestock	: End of
				(million bush	nels)				
1961	7.0	93.2	100.2	9.6	1.9	16.6	28.1	65.4	6.7
1948	6.7	131.4	138.1	3.5	1.5	40.0	45.0	74.3	18.7
6761	18.7	143.5	167.2	10.0	2.0	31.6	43.6	63.8	59.7
1950	59.7	233.5	293.2	36.5	1.9	75.3	113.7	7777	38.1
1951	38.1	162.9	201.0	12.5	1.6	62.1	76.2	114.8	10.0
1952	10.0	90.7	100.7	0.7	1.3	10.4	16.2	77.0	7.5
1953	7.5	115.7	123.2	5.0	2.4	15.3	22.7	78.2	22.3
1954	22.3	235.3	257.6	8.0	2.9	47.7	58.6	124.0	75.0
1955	75.0	242.5	317.5	8.0	2.6	66.1	76.7	159.4	200
1956	81.4	205.1	286.5	0.00	3.3	22.0	33.3	172.6	90.0
yr. ave.	23 6	166.0	200	30.6	0	2000	5	1 201	0
0641-190	26.0	100°4	T.70.2	40°2	Kek	2001	74.04	TOLOT	4000
19571	80.6	562.0	642.6	10.0	3.0	0.09	73.0	242.0	327.6

Preliminary estimate. Source: Federal-State Crop Reporting Service.

Historical supply and distribution data were obtained from the following U. S. Department of Agriculture publications: <u>Grain and Food Statistics</u>

Through 1956, Statistical Bulletin No. 159; The Food Situation, October, 1957; and <u>Grop Production</u>, <u>Annual Summerry By States</u>, 1947-1957.

Production

United States: Production of grain sorghums has been variable, since this crop has been used largely as a substitute for wheat and cotton when these crops had to be abandoned. The major producing states are Texas, Kansas, and Oklahoma. This is an area of very hazardous weather conditions, thus grain sorghums are suitable since they are a drought resistant crop and require a long growing season.

For a ten-year period (1947-1956) average production in the United States was 161.8 million bushels. This compares with a high, until 1957, of 242.5 million bushels in 1955. In 1957 the all time high of 562.0 million bushels of grain sorghums was produced in the United States. This was 2.3 times larger than the 1955 crop and 3.5 time the ten-year average.

The three state area of Kansas, Oklahoma, and Texas over the ten-year period (1947-1956) produced 84.3 percent of the United States production.

This compares to 68.0 percent in 1957 when this area produced 2.3 times its ten-year average. Toward the end of the 1947-1956 period a decline was noted in the percentage of production in this area of the total production. Further analysis shows that from 1947-1956, 87.5 percent of the United States production was from the selected Great Plains states of South Dakota, Nebraska, Kansas, Oklahoma, and Texas. Eighty-three percent of the total 1957 production was in this Great Plains area.

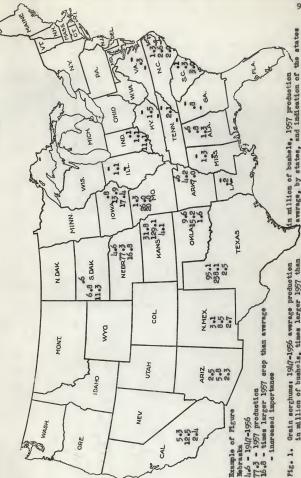
In number of bushels Texas, Kansas, and Oklahoma are not producing less, but that rather the Northern Great Plains states have increased their production. Percentagewise of the total United States production this has caused a slight movement from Texas, Kansas, and Oklahoma to the Northern Great Plains states and along the western edge of the Corn Belt. Development of better adapted varieties has probably caused this movement to areas which have more rainfall and shorter growing seasons. This allows grain sorghums to be planted instead of corn.

Figure 1 shows the changes which have been taking place in grain sorghum production. Missouri, Iowa, and Nebraska have made the largest gains in production. This trend differs from that noted by R. J. Doll in 1952 when he stated that grain sorghum production was on the decrease in Missouri. Since that time Missouri production has risen very sharply. This upward trend which appears to be taking place includes states surrounding Missouri to the south, east, and north and reflects the substitution of grain sorghums for corn. The production increases in the Southwest could very well be caused by the use of irrigation on arid land.

Kansas: Yansas produced 19,6 percent of the United States production over the ten-year period. The record high for Kansas, until 1957, was 57.3 million bushels in 1951. This compares with the ten-year average of 31.8 million bushels. Twenty-three percent of the United States production in 1957 was produced in Kansas which recorded a new high of 129.1 million bushels, 2.3 times larger than the previous high of 1951.

Production has been mainly in the southwestern third of the state with central and southcentral areas being next. In 1955, 55.1 percent of the

¹R. J. Doll, Grain Sorghum in the Great Plains Economy, p. 10.



laverage, by states, and indication of the states Summary By States, U.S.D.A., 1947-1957. the pass ten years. during Source: Computed from data in Grop Production, Annual which are showing increasing importance in production in million of bushels, times larger 1957 than

grain sorghum production was located in the western half of the section outlined in Figure 2, and 71.6 percent for the whole outlined section. For the 1956 crop 46.8 percent of total production was in the western half and 59.6 percent for the outlined area. In 1957, 47.4 percent was in the western half and 68.8 percent of the production was produced in the outlined area.

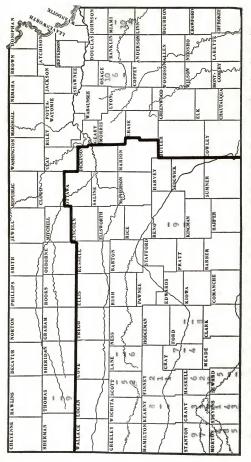
Figure 2 shows the top ten producing counties of grain sorghums in Kansas for 1955-1957. Production in Kansas has mainly been in the south-western two-thirds of the state.

Non-Feed Uses

Since about 1944 exports have been of importance in the distribution of grain sorghums for non-feed uses. For the ten-year period of 1947-1956, 24.44 percent of the total disappearance left the United States through exports. This movement to foreign countries has been due to grain sorghums being relatively cheap compared to other grains. From 1947-1956, an average of 33.7 million bushels was exported each year compared to an average annual production in Kansas of 31.3 million bushels.

The remaining part of non-feed uses of grain sorghums goes for food and industrial uses and seed. Six and six-tenths percent of the total disappearance was used for food and industrial uses from 1947-1956 while 1.4 percent was used for seed. Some of the industrial uses of grain sorghums are industrial alcohol, tapicca, flour used in wall board, paper and cloth sizing, adhesives, and drilling mud for the petroleum industry. A wet-

¹R. J. Doll, <u>Grain Sorghum in the Great Plains Reconcery</u>, p. 19. 2W. M. Ross and H. H. Laude, <u>Growing Sorghums in Kansas</u>, Kansas Agricultural Experiment Station Circular 319, p. 13.



top number in county Mank of top ten counties in production, 1955-57 crops, in 1955; middle number, 1956; and bottom number, 1957. State-Federal Crop Reporting Service. Kangas represents rank Grein sorghams: Sources ci -911

processing plant at Corpus Christi, Texas, which produces starch and starch products, has been increasing the quantity of grain sorghums used for food purposes.

Feed for Livestock

Grain sorghums used for livestock feed have been of major importance throughout the history of grain sorghum production in the United States. In 1929, 97 percent of the total production for that year was fed to livestock. Eighty-four percent of the 1956 production went for livestock feed and it is estimated that 77 percent of the 1957 production will be used for this purpose. Percentagewise this shows a drop, but in total bushels there has been a large increase due to the increase in production. In 1929, 43.6 million bushels were fed to livestock. This compares with 1947 and 1956, when 65.4 and 172.6 million bushels, respectively, were fed to livestock.

FREIGHT RATES FOR GRAIN SORGHUMS

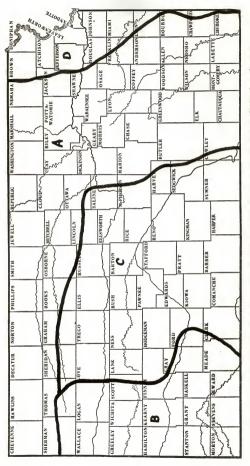
Transcontinental Freight Rate Groups

The United States has been divided into several transcentinental freight rate groups by the Interstate Commerce Commission. Freight rates are set on these groups for the rail movement of certain commodities to the Pacific and Atlantic Coasts. Competitive forces and a desire to simplify tariffs for long hauls have resulted in these freight rate groups being established.

Kansas has been divided into three transcontinental freight rate groups.

The groups are represented on Figure 3 by areas B, A and C, and D. This

¹ Kenneth W. Meinken, The Demand and Price Structure for Oats, Parley, and Sorchum Grains, U. S. Department of Agriculture Technical Bulletin No. 1030, pp. 15-16.



Transcontinental freight rate groups in Kamens for grain sorghime, following changes made by Interstate Commerce Commission, effective November 16, 1956. ŝ F16.

identification is that of the author and differs from that used by the Interstate Commerce Commission and the railroads. Group B as used in this study is actually Group I as used by the Interstate Commerce Commission and the railroads, while Groups A and C are Group G, and Group D is Group F.

This change in identification was made for convenience in presenting this study. Group G was subdivided effective November 16, 1956 by the Interstate Commerce Commission into Groups A and C, as used by the author, for the application of reduced freight rates to grain sorghums shipped to the South Coast (which includes California, Nevada, Arizona, and Western Utah). These reduced rates to the South Coast were to meet the competition of motor-carriers and itinerant truckers and applied to Groups B and C.

One set of freight costs for a carlet of grain sorghums shipped to the South Coast from any point of origin within a particular freight rate group in Kansas would be the same. Another set of freight costs would apply in a similar situation on grain sorghums shipped to the North Coast (which includes Washington, Idaho, Oregon, and Western Montana).

Freight Rates Used in Problem

Freight rates as they apply to the transcontinental groups in Kansas with changes are shown in Table 3 for the 30 month period under consideration. In the final analysis the basic freight rate plus three percent transportation tax was used, since three percent of the rate to Kansas City would be less than three percent of the rate to the West Coast. Thus, making a cent or two difference in the margin between Kansas City and the West Coast.

D. Philip Locklin, Economics of Transportation, p. 197.

Interstate Commerce Commission, Grain From Groups I and J Origin to Pacific Cost, p. 135.

Desic freight rates plus three percent transportation tax for grain sorgimus shipped from points in Rannas to the lest Coast and Kamps City, July 1, 1955 to December 31, 1957 with changes abova. Dollars per hundred pounds. Table 3.

Crigin in Kaneas Freight Rate Group A	: Basic Freight Rates Flue 3 Percent Transcortation fax Effective (17/1/55: 3/7/56: 11/15/56: 11/17/56: 12/26/56: 12/28/56: 2/25/57: 8/26/57 (10/28/26: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 12/28/56: 11/2	: Basic F : 7/1/55	: 3/7/56 (Doll	11/16/56 lars per h	Rates Plus 3 Percent Trans 56 : 11/16/56 : 12/17/56 : Dollars per hundred pounds)	12/26/56 8)	Tax Effect: 12/28/56	: 2/25/57 1.102	: 8/26/57
Freight Rate Group B	Washington California Washington	0.999	1.051	1.051	1.051	1.102	1.102	1.102	0.829
Freight Rate Group C	California	0.999	1.051	0.932	0.886	0.932	0.932	0.896	0.886
Freight Rate Group D	California	0.999	1.051	1.051	1.051	1.102	1.102	1.102	1.143
Carden City	Kansas City	0.381	0.402	0.402	0 -402	0.402	0.422	0.422	0.438
Salina or Wichita	Kanses City	762.0	0.309	0.309	0.309	0.309	0.324	0.324	0.335

Lobbeined by personal correspondence from J. A. Lynch, Transportation Assistant, The Board of Trade of Kansas City, Missouri, letter dated March 10, 1958, and from M. B. Hammer, Assistant Director, Eureau of Traffile, Interstate Commerce Countssion, Machington 25, D. C., letter dated April 1, 1958, File No. 282052.

Freight rates are different from each point of origin in each freight rate group in Mansas on shipments and to Fansas City. Therefore, certain points of origin were choosen to be the most representative for the groups under consideration (B and C).

Garden City was used as the origin in Croup B for shipments made to
Kansas City. This origin was centrally located in the main producing area of
this group. Salina and Wichita were used as the origins for Group C shipments to Kansas City. Rates are the same to Kansas City from these two
origins. All rates used applied to cars of a mirimum weight of 80,000
pounds.

MOVEMENT OF KANSAS GROWN GRAIN SORGHUMS

Source of Obtaining Movements to Western States

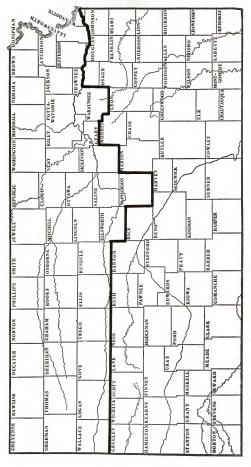
Data concerning the movement of grain sorghums from Kansas to the West Coast was obtained from the records of the North and South Divisions of the Kansas Entomological Commission. Figure 4 shows these divisions. Offices for the North Division are located at the Department of Entomology, Kansas State College, Manhattan, and for the South Division at the Department of Entomology, University of Kansas, Lawrence.

The data were taken from certificates which must be issued to all cars or trucks of grain sorghums shipped to certain Western States. These certificates state that the grain being shipped is free of infestation of the European corn borer. In February 1950 all of the states west of, and including, Colorado put into effect quarantines which would help stop the European corn borer from spreading to these states. This was due to the rapid spread of the borer westward during the summer of 1949. The quarantines stated that all corn and grain sorghums shipped from the European corn borer area (which included Kansas) had to be passed through a half-inch mesh screen. This screened out all foreign matter which was large enough to harbor the larvae of the borer. After the grain had been screened it was certified by the state entomologist of the Division from which it was shipped.

Since 1950 the borer has spread into the Eastern counties of Colorado and that state subsequently removed the quarantine. This leaves eight states which still carry the quarantine at the present time. These are Washington,

Ransas Entomological Commission, 22nd Riennial Report, 1949-1950, p. 14.

Kansas Entomological Commission, 24th Biennial Report, 1953-1954, p. 7.



Mg. 4. North and South Mivisions of the Kansas Entomological Commission.

Oregon, California, Idaho, Utah, Nevada, Arizona, and New Mexico.

Since the Division offices usually destroy their inspection certificates after two fiscal years data could be obtained only from July 1, 1955 until the study closed December 31, 1957.

Movement From Kansas Entomological Divisions to the West Coast

Table 4 shows movement of grain sorghums out of Kansas to seven Western states from the Entomological Commission's Divisions. New Mexico was not included in the table since during the 30 month period studied there was no movement from Kansas to that state.

For the first 18 months (July 1, 1955 - December 31, 1957) movement by reilroad from the North Division was quite small, accounting for only 2.0 percent of the total movement from the state. The remainder of the movement from the state moved from the western half of the South Division. Of the 644 carlots shipped from Kansas during this 18 month period 390 carlots or 60.6 percent of the total movement was designated for Washington, 24.3 percent or 160 carlots to California, and 13.4 percent or 86 carlots to Oregon. The remaining 1.2 percent or eight carlots were shipped to Nevada, Utah, and Idaho.

In 1957, 42.7 percent of the railroad movement was from the North Division, while the remainder (57.3 percent) was shipped from the South Division. It was noted that the largest part of the shipments from the North Division moved from the southwestern counties of this Division.

During the 30 month period 35.7 percent or 1,351 carlots of the total state movement were shipped from the North Division. Eighty-seven and seven-tenths percent of this movement was designated for California and Utah. For this same period 64.3 percent or 2,426 carlots of the total movement to the

Grain sorghums: Movement from Kansas by Kansas Entomological Commission Divisions to seven Western States, July 1, 1955 to December 31, 1957. Table 4.

Year :	: Cars/Trucks of Grain Sorthwes Shipped to: Year : Davision : Wash.; Oregon:Calif.; Weweda; Arisons: Utahildaho	Cars/	Trucks Oregon	of Grain	Sor rhu	Arizon	arUtah:	Idaho	Total Cars Shipped	Total : Trucks : Trucks :	Total: Estimated: Bushels:	Percent of Cars From Each Division
19552	North	3/6	3%	15/2	2/0				107	00	6,000	97.3
	State	73/0	20/02	15/2	2/0				110	~	221,000	100.0
1956	North	307/0	0/99	145/7			2/2	0/1	254	06	20,000	1.9
	State	317/0	0/99	115/11			2/2	0/7	534	6	1,072,500	100.0
1957	North	17/0	2%	812/0	117/0	19/0	373/0		1338	010	2,676,000	42.7
	State	127/0	2770	2220/5	114/0	19/0	629/0		3133	10	6,268,500	100.0
30-mon	30-month Totals											
	North	0/067	100/0	812/0 114/0	111/0	0/61	373/0	170	1351	16	2,702,000	35.7
	State	517/0	110/0	2380/14 116/0	0/911	19/0	631/2	0/7	3777	16	7,562,000	100.0

Includes only period from July 1, 1955 to December 31, 1955.

west was from the South Division. Movement to California from the South accounted for 64.6 percent of the total South Division shipments, while shipments to Washington and Utah added another 30.8 percent. For the state 63.0 percent or 2,330 carlots moved to California and 30.4 percent or 1,148 carlots moved to Washington and Utah.

Movement From Freight Rate Groups to the West Coast

After obtaining the movement data from the Entomological Commission the movement was broken down into the freight rate groups in Kansas, which have previously been mentioned. This break down has been shown in Table 5.

For the first 18 month period covered 3.4 percent of the movement by railroad to the Western states concerned was from Group A, 32.6 percent from Group B, and 64.0 percent from Group C. In 1957, or the last 12 months of the period, 0.2 percent of the movement by rail was from Group A, 36.4 percent from Group B, 13.3 percent from Group C, and 0.1 percent from Group D. For the total 30 month period 3,747 cars or 99.2 percent of the movement by rail left Groups B and C.

Since the movement of grain sorghums during the period studied was heaviest from Groups B and C the remainder of this study was devoted to these area.

Movement to Kansas City

Movement from the rate groups in Kansas to Kansas City was not pinpointed as was the case of the western movement. As was stated earlier the
assumption was made that a very large percentage of the carlot receipts in
Kansas City were received from Kansas during the period considered. A
further assumption was that this grain came from freight rate Groups B and C.

Grain sorghams: Movement from freight rate groups in Kansas to seven Western States, July 1, 1955 to December 31, 1957. Table 5.

	dronb 1	· Wash.	: Oregon:	F	Calif.: Nevada: Arizona: Utah:	Arlzon	a: Utah:	TOBBO		Cars :Trucks :E Shipped:Shipped:	:Estimated: 1: Bushels :	Each Group
19552	ABOB	21,0	17/0	2/2	2/0			-	3997	ત	2,000 141,000 78,000	26.4
	State	73/0	20/0	15/2	2/0				110	CK	221,000	100.0
1956	AGGA	16/0 102/0 199/0	39/0	16/7			72	9/7	373	171	42,500 283,500 746,500	2.00
	State	317/0	0/99	145/7			2/2	0/4	534	6	1,072,500	100.0
1957	4808	68/0	13/0	1922/3	114/0	19/0	574/0		2708 417 22	m cu	12,000 5,417,500 835,000 4,000	86.4
	State	127/0	24/0	2220/5	114/0	0/61	629/0		3133	2	6,268,500	100.0
0-10	30-month Total	133										
	4 M O A	221/0	55/0	4/0 1940/12 436/2	2/0	19/0	2/1. 574/0 53/1 2/0	9/7	28 2918 829 2	1 2 K	5,842,000 1,659,500 4,000	21.9
	State	9/215	110/0	2380/14	0/911	19/0	631/2	0/17	37777	16	7,562,000	100.0

Each carlot estimated 2,000 bushels, each truck 500 bushels. Includes only period from July 1, 1955 to December 31, 1955.

During the 30 month period analyzed in this study there was a constant receipt of grain sorghums in Kansas City. For the first six months covered there were 1,519 carlots received in Kansas City or an estimated 3.2 million bushels. In 1956, 2,456 carlots were received or 4.9 million bushels, and in 1957, 8,500 carlots or 17.0 million bushels.

Truck Movements

Sixteen trucks bearing certificates moved during the 30 months. This was the equivalent of about four railroad cars. Since movement of grain sorghums from Kansas by truck was so small it was not considered in the spatial problem. Trucking of grain sorghums was generally done by itinerant truckers, therefore, it was difficult to set trucking rates to use in an equilibrium problem.

Grain sorghums which are trucked generally go as a secondary product back to the area from which the trucker came with a primary product. Therefore, the trucker wishes to pay his expenses back and if a profit can be realized he will take advantage of it. It appears that trucking rates generally run around 85 percent of railroad freight rates.

Large quantities of grain sorghums are trucked from Texas to California and during the 1955-1956 season almost all movements were by truck. 1 From July 1, 1953 to June 30, 1954, 91 truck loads of grain sorghums left the South Division of the Mansas Entomological Commission carrying quarantine certificates. 2

Interstate Commerce Commission, <u>Grain From Group I and J Origing to Pacific Coast</u>, p. 135.

Zanapas Entomological Commission, <u>24th Biennial Report</u>, 1953-1954, p. 15.

PRICE DIFFERENTIALS BETWEEN LOS ANGFLES, SEATTLE, AND KANSAS CITY

Cash Price

The 30 month period included in this study was broken down into 131 weeks. Price of grain sorghums, per hundredweight, at Los Angeles, Seattle, and Kansas City was listed for each respective week for which it could be obtained. Los Angeles terminal market price was quoted 115 weeks out of the 131 weeks in the study, while the Seattle Grain Exchange quoted prices for only 65 weeks. Kansas City price was quoted for all 131 weeks. Lack of price data for Washington was due to the fact that since grain sorghums are not grown in Washington prices are quoted only when grain sorghums are actually traded. 1

For the remainder of this study Los Angeles terminal market price will be referred to as the price for California, and the Seattle Grain Exchange price as the Washington price.

From the weekly prices for the three markets the freight rates as they applied to Groups B and C were subtracted. Using the data for Group B and the week of January 1-7, 1956 the actual grain sorghum price in California was \$2.675, in Washington \$2.750, and in Kansas City \$2.11. Freight rates from Group B during this same week were 99.9 cents to both California and Washington, and 33.1 cents to Kansas City. All prices and freight costs are per hundredweight. After subtracting the freight rates from the actual prices the net prices were \$1.676 for California, \$1.751 for Washington, and \$1.729 for Kansas City.

¹P. L. Doctor, letter to author, March 5, 1958.

The next step was to take the net Kansas City price from the net California and Washington prices for each respective week. This gave a margin for California and Washington above or below the Kansas City price. For the example of January 1-7, 1956 the price differential for California was 5.3 cents below the Kansas City price, while Washington was 2.2 cents above the Kansas City price.

On a 100,000 pound carlot shipped from Group B to California this would mean that the total amount received for this carlot in California would be \$53.00 less than if it was shipped to Kansas City. In Washington the total received for the car would be \$22.00 more than Kansas City.

This procedure was used for both Groups B and C, with the results shown on Figures 5 and 6 for these groups, respectively. The worksheets from which the above example was taken and which were used to derive each point on Figures 5 and 6 appear in Tables 8 and 9 in the appendix.

In Figure 5 the range in the differential for California was from 43.0 cents below the Kansas City price in June 1956 to 42.9 cents above the Kansas City price in September 1957. Washington price differential ranged from 18.9 cents below in June 1956 to 36.5 cents above in September 1957. California price was below Kansas City price 67 weeks, above 47 weeks, and equal one week for Group B. Washington price was below 12 weeks and above 53 weeks for the same group.

For Figure 6 the range in the price differential for California was from 49.2 cents below Kansas City in August 1956 to 26.9 cents above in September 1957. The price differential for Washington was from 28.2 cents below Kansas City price in June 1956 to 26.2 cents above in September 1957. In Group C, California price was below Kansas City price 96 weeks and above 19 weeks. Washington price was below Kansas City 46 weeks and above 19 weeks.

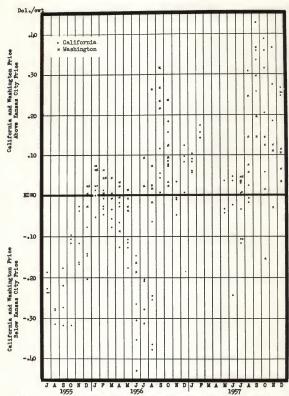


Fig. 5. Cash price differential to the Kansas seller between selling grain sorghums on California and Washington markets compared to Kansas City market for freight rate Group B of Kansas, July 1, 1955 - Dec. 31, 1957.

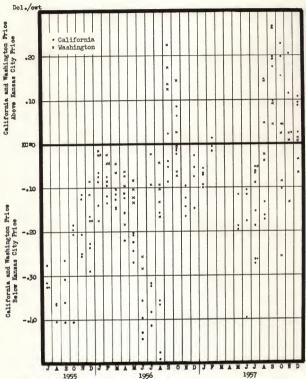


Fig. 6. Cash price differential to the Kansas seller between selling grain sorghums on California and Washington markets compared to Kansas City market for freight rate Group C of Mansas, July 1, 1955 - Dec. 31, 1957.

Loan Price

Government support prices for terminal markets were taken for the three crop years of 1955-1957 for California and Kansas City. Washington did not have a support price for the first two crop years concerned, but a support price was set in 1957 due to the availability of storage in that state.

For the 1955 grain sorghum crop the terminal market support price in California was \$2.63, per hundralweight, while at Kansas City terminals the support price was \$2.22. The California terminal market support price was \$2.34 in 1956 and \$2.73 in 1957, while at Kansas City the support price for terminal markets was \$2.42 in 1956 and \$2.31 in 1957. Washington terminal market support price for the 1957 crop was \$2.73.

The same procedure was used for the loan price differential as in the cash price differential. For example, the loan price for the 1955 crop was \$2.63 in California and \$2.22 in Kansas City. On January 1, 1956 the freight rate from Group B to California was 99.9 cents and 38.1 cents to Kansas City. After subtracting the freight rates from the California and Kansas City loan prices the net loan price for California was \$1.631 and \$1.839 in Kansas City. In this example, for January 1, 1956, California terminal markets held a negative margin of 20.8 cents compared to Kansas City terminal markets on grain sorghums stored under government loan. On a 100,000 pound car the shipper would have taken \$208.00 less for his stored grain in California than in Kansas City.

Following this procedure the loan price differentials were calculated for Groups B and C for the three crop years, taking into account the freight rate changes. The results showed that Kansas City held an advantage for the 1955-1957 crops in the loan rate over California and for the 1957 crop over Washington for grain sorghums shipped for storage from Group C. The California margin ranged from 13.4 cents below the Kansas City rate for the 1957 crop to 33.2 cents below Kansas City in March 1956 for the 1955 crop. Up to December 31, 1957 the Washington margin was 39.1 cents below Kansas City for the 1957 crop shipped out of Group C.

Kansas City also hold a loan advantage over grain sorghums shipped from Group B to California for the 1955-1956 crops. The range was from 0.7 cents below Kansas City price in December 1956 for the 1956 crop to 23.9 cents below Kansas City price in March 1956 for the 1955 crop. For the 1957 crop California held a margin of 2.9 cents above Kansas City on grain stored under the loan rate up to December 31, 1957. Washington was 28.5 cents below Kansas City for the 1957 crop up to the end of 1957.

Government support prices for grain sorghums stored in terminal warehouses are based on grain grading No. 2 or better and which contains 13 percent or less moisture. The warehouse has to be approved for storage.

RELATIONSHIP OF MOVEMENT IN RESPONSE TO PRICE

California and Washington

Shipments made to California and Washington from Groups B and C in
Kansas were divided into three categories for the 30 month period. Comparisons
were made when California and Washington had a cash price advantage over
Kansas City, when the cash price was disadvantageous, and when shipments
moved during a week when no cash price was quoted for California and
Washington. These comparisons are shown in Tables 6 and 7 for Groups B and
C, respectively.

Table 6. Grain sorghums: Shipments from Group B to California and Washington, when there was a cash price advantage, disadvantage, or no cash price reported, compared to Kansas City price July 1, 1955 to December 31, 1957.

	Price :	Price	:No Price :Reported	: Price	ments to Washi Price Disadvantage	: No Price : Reported
1955		2		5	15	31
1956	5	11		76	21	. 5
1957	1749		30	54		14
Total	1754	13	30	135	36	50
Percen of Total Shipmen to Each State	al nts	0.7	1.7	61.1	16.3	22.6

July 1, 1955 to December 31, 1955.

As shown in Table 6, 97.6 percent or 1,754 of the 1,797 cars designated to California during the 30 month period from Group B moved when California held a price advantage over Kanses City. Thirteen cars or 0.7 percent of the total shipments moved to California when there was a disadvantage in the price, while 30 cars or 1.7 percent moved during weeks when no cash price was reported in California. Eighteen of the 30 cars shipped when no cash price was quoted moved during weeks when the loan rate was favorable in California over the Kansas City loan rate. The largest movement made to California from Group B was during the latter 17 weeks of 1957 during which the cash price was favorable over Kansas City, except for one week when no cash price was favorable over Kansas City, except for one week when no cash price was favorable over Kansas City, except for one week when no

Table 7. Grain sorghums: Shipments from Group C to California and Washington, when there was a cash price advantage, disadvantage, or no cash price reported, compared to Kansas City price, July 1, 1956 to December 31, 1957.

:	Price	: Price	:No Price :	Price :		No Price Reported
1955 ¹		13			8	13
1956	3	124	2	13	157	29
1957	274	7	13	13	14	30
Total	277	144	15	26	179	72
Percent of Total Shipments to Each	5					
State	63.5	33.0	3.5	9.4	64.6	26.0

¹July 1, 1955 to December 31, 1955.

Out of 221 shipments designated for Washington from Group B, 61.1 percent or 135 cars moved when Washington held a cash price advantage over Kansas City. Sixteen and three-tenths percent or 36 cars were shipped when price was unfavorable in Washington, and 22.6 percent or 50 cars moved when no cash price was quoted in Washington.

There were 30 weeks when California price held a margin above Kansas City price that there were no shipments to California from Group B.

Washington had 27 weeks when it held an advantageous margin and had no shipments designated to it from Group B.

Ninty-seven percent of the movement, 1,743 out of 1,797 cars shipped Toroup B to California, moved when California held a cash price advantage over Kansas City for a period of four or more weeks in succession. One hundred ten of the 221 cars, or 49.3 percent, designated for Washington moved during a likewise period of time. The rest of the movement to California and Washington made during a cash price advantage over Kansas city moved when the advantage was held from one to three weeks in succession.

All 36 cars shipped from Group B to Washington at a price disadvantage move immediately following weeks when Washington held a price advantage over Kansas City.

Sixty-three and one-half percent of the shipments from Group C to California, as reported in Table 7, were made when California held a cash price advantage over Kansas City. This accounted for 277 cars out of a total of 436 shipped from Group C to California during the 30 months studied. One hundred-forty-four cars or 33.0 percent moved when the cash price in California was disadvantageous, while 15 cars or 3.5 percent were shipped when no cash price was reported. Most of the shipments designated for California when the cash price was unfavorable moved in the first six months of 1956 before the reduced freight rates went into effect on grain sorghums.

Only 9.4 percent of the shipments designated from Group 6 to Washington moved when Washington held a cash price advantage. During the 30 months this accounted for 26 of the 277 shipments made. Sixty-four and six-tenths percent or 179 cars out of 277 moved when the cash price was disadvantageous, while 72 cars or 26.0 percent moved when no cash price was reported.

From Group C there were eight weeks when shipments were not received in California when this state held a cash price advantage over Kansas City.

Washington had ten weeks when it held a cash price advantage, but received no shipments.

Sixty-one and nine-tenths percent of the movement from Group C to California was made when a cash price advantage was held over Kansas City for four or more successive weeks. This was 270 of the 436 cars designated for California. The 26 cars shipped to Washington under a favorable cash price moved during the four or more week period. All other movement to California under favorable cash price conditions moved when the cash price advantage was held from one to three weeks in succession over Kansas City.

One hundred percent of the 179 shipments from Group C, designated for Washington when a price disadvantage was held by Washington, moved during periods when Washington was helding a negative price differential for five or more successive weeks. None of these shipments moved during weeks immediately following a positive price differential. Ninty-six and one-half percent of the 144 shipments to California from Group C moved when California held a price disadvantage with Kansas City for five or more weeks in succession. The remaining 3.5 percent moved immediately following positive price differentials in favor of California.

Effects of Western Movement on Kansas City Movement

During all the weeks when either California or Washington held a cash price advantage Kansas City was receiving carlots of grain sorghums. When there was movement to California or Washington it appeared at no time to cause decreased movement to Kansas City.

For the 131 weeks in the study there was an average of 95.5 carlots per week of grain corghums received in Kansas City. The range for this period was two cars in the second week of February 1957 to 1,730 cars in the second week of December 1957. In February 1957 receipts were very small, but at this particular time no shipments were made west. This was following

the small crop of 1956. Farm stocks on hand and production appeared to influence the carlot receipts in Kansas City.

STRAMARY AND CONCLUSIONS

Grain sorghums are becoming of increasing importance to the Kansas farmer as a cash grain and, also, as a feed grain. This study was concerned with the effectiveness with which grain sorghums were marketed for cash and covered the period from July 1, 1955 to December 31, 1957.

According to economic theory an equilibrium in price should exist between the producing and consuming area. Kaneas was considered the producing area in the partial spatial equilibrium problem which was analyzed, while Kaneas City, California, and Washington were designated the consuming area. For grain sorghums shipped out of Kaneas the equilibrium was not found in the market. Wide fluctuations were found between the California - Washington markets compared to Kaneas City. The extreme example was when California price differential ranged from 43.0 cents below to 42.9 cents above the Kaneas City price during the 30 month period studied for Group B.

Reduced freight rates added to the cash price advantage which California sometimes held over Kansas City. For the first half of the period studied movement was mainly to Washington, but after the reduction in freight rates went into effect the movement changed to California. Freight rates were reduced to most the competition of other earriers.

Movement to California from freight rate Group B in Kansas was found to be made 97.6 percent of the time when price conditions were favorable in California over Kansas City. Therefore, it appeared that the Kansas seller was taking advantage of this market when price was favorable.

It appeared that all shipments, from Group B to California and Washington

made when these states were at a price disadvantage were caused by a lag in shipments compared to price. Movements made to Washington when no cash price was reported might have been on a contract basis, since this movement seemed not to be accounted for by a lag in the market.

For shipments designated from Group C to Washington and California the full advantage of cash prices appeared not to be taken. Of the 33.0 percent of the total shipments made during a price disadvantage to California 96.5 percent were made when California had held a negative price differential for five or more successive weeks. One hundred percent of the 179 cars shipped to Washington at a price disadvantage were also during a period of five or more successive weeks when Washington held a negative price differential with Kansas City. Therefore, the shipments which moved under a price disadvantage appeared not to be caused by a lag in the shipments compared to price.

Carlot receipts of grain sorghums in Kansas City which were assumed to be from the main producing area of Kansas were not affected during the periods of favorable prices in California and Washington.

The price differential suggested that greater quantities of grain sorghums should have moved to California and Washington (relative to movement to Kansas City) if the greatest opportunities for profit had been realized. Even though the Kansas sellers have not taken full advantage of the California and Washington markets this does not fully support the original assumption that these markets should have an effect upon the number of carlot receipts in Kansas City.

It was noted that in Group B the lowest price differential for California and Washington below Kansas City appeared during the same month (June 1956) and that the highest price differential over Kansas City for both states was September 1957. The situation in Group C was similar. This minus differential could possibly have been due to any increase in price in the Kansas City area in June 1956 in expectation of a small crop in the fall of 1956. The high positive differential in September 1957 may have been due to the large crop which was almost ready to be harvested. Possibly price decreased in the Kansas City area in expectation of large quantities being available during harvest, while this probability did not effect the Western markets.

Another possible reason for price fluctuations could be the characteristics of grain sorghums to pick up moisture while in storage (elevator or moving in cars). In conversation and correspondence with grain men this factor was pointed out as being one of the chief problems with the 1957 crop. A carlot of grain sorghums testing 13 percent moisture in Kansas might be 14 or 15 percent when it arrived in California. This was of major concern when grain was shipped for government storage, since the loan rate calls for 13 percent or less moisture.

ACKNOWLEDGEMENTS

The assistance given by the major instructor, Dr. Leonard W. Schruben, Professor, Agricultural Economics, Kansas State College, in the preparation of this thesis is gratefully acknowledged.

The cooperation from the Departments of Entomology, at both the University of Kansas and Kansas State College, in the author obtaining grain sorghum shipments, was appreciated.

The suggestions and assistance of Ruth E. Clifton and other members of the Department of Economics and Sociology, Kansas State College, and the use of the facilities of the department which made this study possible were also greatly appreciated.

REFERENCES

Books and Pamphlet

- Doll, R. J., Grain Sorghum in the Great Plains Economy, Kansas City: Federal Reserve Bank of Kansas City, August 1952.
- Heady, Earl O., Economics of Agricultural Production and Resource Use, New York: Prentice-Hall, Inc., 1952.
- Locklin, D. Philip, <u>Recomming of Transportation</u>, Third Edition, Chicago: Richard D. Irvin, Inc., 1949.

State Bulletins

- Kansas Entomological Commission, 22nd Biennial Report 1949-1950, Topeka: State Printing Office, 1950.
- Kansas Entomological Commission, 24th Biennial Report 1953-1954, Topeka: State Printing Office, 1954.
- Kansas State Board of Agriculture, Farm Facts 1956-1957, Topeka: State Printing Office, 1957.
- Kansas State Board of Agriculture, Kansas Agriculture, 36th and 37th Biennial Reports, Topeka: State Printing Office, 1948 and 1950.
- Kansas State Board of Agriculture, Price Patterns, Topeka: State Printing Office, June 1957.
- Ross, W. M., and H. H. Laude, <u>Growing Sorchums in Kansas</u>, Kansas Agricultural Experiment Station Circular 319, May 1955.

Government Bulletins

- Interstate Commerce Commission, <u>Grain From Group I and J Origins to Pacific Const</u>, Investigation and Suppension Docket No. 6307, Vashington: <u>Government Printing Office</u>, <u>Decided September 22</u>, 1956.
- Meinken, Kenneth W., The Demand and Price Structure for Cate, Parley and Sorthum Grains, U. S. Department of Agriculture Technical Bulletin No. 1080, Mashington: Covernment Printing Office, September, 1953.
- U. S. Commodity Credit Corporation, 1957-Crop Couln Sordhums Price Support Program, 1957 C.C.C. Orain Price Support Bulletin 1, Suppliment 1, Amendment 5, Grain Sorghume, November 4, 1957.

- U. S. Department of Agriculture, <u>Crop Production</u>, <u>Annuel Summary By States</u>, 1947-1957, Agriculture Marketing Service, Crop Reporting Board, Washington D. C.
- U. S. Department of Agriculture, Field and Seed Crops, By States, 1956-57, Agricultural Marketing Service, Crop Reporting Board, Washington D. C.
- U. S. Department of Agriculture, Grain and Food Statistics Through 1956, Agricultural Statistics Bulletin No. 199, Washington: Government Frinting Office, Revised, May, 1957.

Personal Correspondence

- Carlson, K. G., Freight Traffic Manager-Rates, Union Pacific Railroad, 1416 Dodge Street, Omaho 2, Nebraska, Personal Letter, March 26, 1958, File No. R-75-550-1.
- Doctor, P. L., Agricultural Statistician, Agricultural Estimates Division, Agricultural Marketing Service, United States Department of Agriculture, 348 Federal Office Building, Seattle 4, Machington, Personal Letters, January 29, 1958, February 7, 1958, and March 5, 1958.
- Hammer, W. B., Assistant Director, Bureau of Traffic, Interstate Commarce Commission, Washington 25, D. C., Personal Letter, April 1, 1958, File No. 282052.
- Lynch, J. A., Transportation Assistant, The Poard of Trade of Kansas City, Missouri, Tenth and Wyandotte Streets, Kansas City, Missouri, Personal Letter, March 10, 1958.

Unpublished Material

Shirk, Wayne M., <u>Marketing Grain Sorghum in Kanpag</u>, Unpublished Master's Thesis, Kanpas State College, Manhattan, Kanpas, 1956.



Appendix: WORKSHEETS USED TO ANALYZE PRICE DIFFERENTIALS AND MOVEMENT.

The following worksheets (Tables 3 and 9) were used in deriving the points plotted on Figures 5 and 6. Procedure used appears in the written discussion of this subject.

Comparison of grain sorgium movements to eash price differences from freight rate Group B in Kansas to California, Mashington, and Kansas City. Table 8.

	3	BILL	California		: Washington	rlon	**	Tanana City	City		· Differential.	ntin14
Neek Berdard	Week : Cagh Price Sardring: Actual: Net	agh hal:	" "	Carlot Receipts2		Noti:	Carlot : Cash Price Receipts?: Actual: Netl	Cash Price Actual: Netl	Net1 :	Carlot Receipts3	: Calif.:	Wash.
1955												,
July		750	81.751		40	40		\$2.37	\$1.989	17	\$238	46-
		200	1-701					2,31	1.929	15	228	
10		200	1.701					2.27	1.889	21	188	
27		2,650	1.651					2.27	1.889	19	238	
31			-					2.22	1.839	42		
Aug		887	1.489					2,15	1.769	8	280	
		2.550	1.551					2.21	1.829	22.52	278	
7 6		618	312 4					200	1 850	9 60	718	
		200	1.0747					0 11	2000	100	178	
Sept 4		220	1.551					2107	1 750	400	000	
-1 6		220	T+222					0 10	3 000	12	202	
7		250	1.240					3 3 5 5	1 960	18	100	
		220	Te551					K*KU	1.009	620	220	
Oct	2	250	1.551					2000	1.009	200	OTC -	
91		200	1.501					200	Teors	444	077	
1		200	1.501	-				1,98	1.599	177	860-	
2		200	1.501	-				1.99	1.609	100	-108	
30		550	1.551				10	2.05	1.669	188	- 110	
Nov 6		550	1,551				11	1.97	1.589	178	-038	
1.		550	1.551				10	1.96	1.579	777	028	
3		200	1.501				e	2.05	1,669	53	168	
27		575	1.576				7	2,12	1.739	87	163	
Dec 4		537	1.588		2,700	1.701	15	2,11	1.729	2	143	028
		600	1.601		2,750	1.751		2,13	1.749	165	148	4.002
35		528	1.526		2,750	1.751	2	2,11	1.729	62	203	4.022
255		2.650	1.651		2.750	1.751		2,11	1.729	33	078	f.022

2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	Veek	Cash	California Cash Price :	Carlot :	Cash Price	rton Price :	Carlot :	Cash Price	City Price :	Carlot		Differential
\$2.675 \$1.676 \$2.683 1.659 \$2.790 1.701 2 2.750 1.751 11 2.07 1.659 \$2.700 1.701 2 2.750 1.751 2 2.06 1.679 \$2.700 1.701 2 2.750 1.751 2 2.06 1.679 \$2.700 1.701 2 2.750 1.751 2 2.07 1.689 \$2.700 1.701 2 2.750 1.751 2 2.07 1.689 \$2.700 1.701 2 2.750 1.751 2 2.07 1.689 \$2.700 1.701 2 2.750 1.751 5 2.09 1.779 \$2.700 1.701 2 2.750 1.751 5 2.09 1.779 \$2.700 1.701 2 2.80 1.751 2.170 2.11 1.779 \$2.700 1.701 2 2.80 1.701 2.180 1.779 \$2.700 1.701 2 2.80 1.701 2.180 1.779 \$2.700 1.701 2 2.80 1.701 2.180 1.779 \$2.700 1.701 2 2.80 1.701 2.189 \$2.700 1.829 1 2.290 1.729 \$2.700 1.829 2 2.800 2.800 \$2.700 1.829 2 2.800 2.800 \$2.700 1.829 2 2.800 \$2.700 1.820 2 2.800 \$2.700 1.820 2 2.800 \$2.700 1.820 2 2.800 \$2.700 1.820 2 2.800 \$2.700 1.820 2 2.800 \$2.700 1.820 2 2.800 \$2.700 1.820	Beginning	* Actual:	Net1 :	Receipts2:	Actual:			Actuals			-	Wash.
\$\$\begin{array}{c} \$3.676 & \$3.750 & \$1.751 & \$1.753 & \$2.458 & \$2.681 & \$1.699 & \$2.700 & \$1.751 & \$1.751 & \$1.753 & \$2.700 & \$1.751 & \$1.751 & \$1.699 & \$2.700 & \$1.701 & \$2.700 & \$1.751 & \$1.699 & \$2.700 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$1.701 & \$2.701 & \$2.701 & \$1.701 & \$2	9561											
2,700 1,701 2 2,750 1,751 11 2,07 1,699 34 2,700 1,701 2 2,750 1,751 4 2.06 1,679 34 2,700 1,701 2 2,750 1,751 5 2.07 1,699 34 2,700 1,701 2 2,750 1,751 5 2.07 1,699 57 2,700 1,701 2 2,750 1,751 5 2.07 1,699 57 2,700 1,701 2 2,750 1,751 5 2.07 1,699 57 2,700 1,701 2 2,750 1,751 5 2.07 1,709 4,7 2,700 1,701 2 2,750 1,751 5 2.09 1,709 4,7 2,700 1,701 2 2,750 1,751 5 2.09 1,709 4,7 2,700 1,701 2 2,750 1,751 5 2.09 1,709 4,7 2,700 1,701 2 2,750 1,701 5 2.09 1,709 4,7 2,700 1,701 2 2,800 1,709 2 2,80 1,709 2 2,80 1,709 2 2,80 1,709 2 2,80 1,838 2 2,90 1,838 2 2,900 1,839 3 2,000 1,939 5 2,99 1,988 3,700 2,990 1,890 3 2,000 1,939 5 2,49 1,988 3,700 2,990 1,890 3 2,000 1,909 5 2,49 2 1,988 3,700 2,990 1,990 2 2,49 2 1,988 3,700 2,990 1,990 2,49 2 2,49 2 1,988 3,700 2,990 1,990 2,49 2,49 2,198 1,700 2,990 2,49 2,49 2,198 1,700 2,990 2,49 2,49 2,49 2,49 2,49 2,49 2,49 2,49	Jan 1	\$2.675			\$2,750	\$1,751		\$2,11	\$1.729	24	\$053	84.022
2,700 1,701 2 2,750 1,751 4 2.06 1,679 73 2,700 1,701 2 2,750 1,751 2 2,071 1,699 52 2,071 1,699 52 2,070 1,701 2 2,750 1,751 5 2,071 1,699 52 2,071 1,699 52 2,070 1,701 2 2,750 1,751 5 2,071 1,699 52 2,071 1,699 52 2,070 1,701 2 2,750 1,751 5 2,071 1,699 52 2,070 1,701 2 2,750 1,751 5 2,071 1,709 47 2,070 1,701 2 2,750 1,751 2 2,101 1,709 47 2,070 1,701 2 2,001 1,709 1,709 1,709 2,070 1,701 2 2,001 1,709	100	2,683			2,750	1,751	11	2.07	1.689	3%	0000	4.062
2,700 1,701 3 2,750 1,751 2 2,07 1,699 552 2,700 1,701 2 2,750 1,771 5 2,07 1,699 552 2,700 1,701 2 2,750 1,771 5 2,07 1,1099 57 2,700 1,701 2 2,750 1,771 5 2,09 1,709 47 2,700 1,701 2 2,750 1,771 5 2,09 1,709 47 2,700 1,701 2 2,800 1,701 2,101 1,709 47 2,700 1,701 2 2,800 1,702 2,10 1,709 47 2,702 1,802 1 2,900 1,703 2,10 1,709 1,22,10 1,709 2,900 1,809 1 2,907 1,902 1,808 2,209 1,808 2,900 1,809 1 2,907 1,909 5 2,39 1,918 97 2,900 1,809 2 3,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,39 1,918 97 2,900 1,809 3 0,000 1,909 5 2,45 2,138 1,918 2,912 1,801 3 0,000 1,909 5 2,45 2,138 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,138 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,138 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,138 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,138 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,45 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801 3 0,000 1,909 5 2,238 1,778 2,912 1,801	15	2,700		C)	2.750	1,751	4	2.06	1.679	2	4.022	4.072
2,700 1,701 2,750 1,751 5 2,07 1,699 53 2,07 1,699 1,70 2,700 1,701 2,700 1,771 5 2,07 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 2,270 1,709 1,709 2,270 2,270 1,709 2,270 2,2	22	2,700		~	2,750	1,751	C	2.07	1,689	52	4.012	4.062
2,670 1,701 2 2,750 1,771 5 2,09 1,709 22 2,07 1,701 1,001 2 2,750 1,771 5 2,09 1,709 22 2,001 1,700 1,701 2 2,00 1,702 1,001 2,000 1,702 1,001 2,000 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,000 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 2,001 1,703 1,001 1,703	23	2,700			2,750	1.751	20	2.07	1.689	5	4.012	4.062
2,675 1,676 1 2,750 1,751 2,10 1,175 4,7 2,700 1,701 2,270 1,775 2,13 1,779 4,7 2,700 1,701 2,280 1,781 2,11 1,779 16 2,700 1,701 2,280 1,789 2,18 1,779 16 2,700 1,829 1 2,280 1,789 2,18 1,778 2,28 2,900 1,829 1 2,280 1,789 11 2,289 1,888 2,7 2,900 1,829 1 2,280 1,789 11 2,289 1,888 2,7 2,900 1,829 1 2,200 1,249 2,28 1,978 3,7 2,900 1,829 1 3,000 1,949 2,2,29 1,978 3,7 2,900 1,839 3 0,000 1,949 2,2,39 1,978 3,7 2,900 1,839 3 0,000 1,949 2,2,49 1,978 2,7 2,900 1,839 3 0,000 1,949 2,2,49 1,978 2,7 2,900 1,839 3 0,000 1,949 2,2,49 2,188 4,7 2,912 1,864 3,000 1,949 2,2,49 2,188 4,7 2,912 1,864 3,000 1,949 2,2,49 2,188 4,7 2,912 1,864 3,000 2,2,49 2,2,69 2,188 4,7 2,912 1,864 3,000 2,2,49 2,2,69 2,2,18 1,7 2,912 1,864 3,000 2,2,49 2,2,69 2,2,18 1,7 2,912 1,864 3,000 2,2,49 2,2,69 2,2,18 1,7 2,912 1,864 3,000 2,2,49 2,2,69 2,2,18 1,7 2,912 1,864 3,000 2,2,49 2,2,69 2,2,19 1,7 2,912 1,864 3,000 2,2,49 2,2,69 2,2,29 1,7 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,200 2,2,49 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,290 2,2,69 2,2,29 1,7 2,912 2,912 1,864 3,290 2,2,69 2,2,29 1,864 3,2,26 2,2,29 1,864 3,2,26 2,2,29 1,864 3,2,29 1,864		2,700		C	2.750	1.751	20	2.09	1.709	R	008	4.04,2
2,700 1,701 2,750 1,751 2,13 1,749 4,2 2,700 1,701 2,800 1,801 2,11 1,779 1,2 2,770 1,701 2,800 1,801 2,11 1,779 1,1 2,770 1,702 2,800 1,801 2,10 1,709 1,1 2,900 1,809 1 2,900 1,809 2,20 1,809 2,200 1,809 2,200 1,809 1,209 1,209 1,209 1,209 2,200 1,809 2,200 2,200 1,809 2,200		2,675		-	2.750	1.751		2.09	1.709	277	033	4.042
2,700 1,701 2.800 1,801 2.11 1,729 21 2,770 1,673 2.800 1,703 2.11 1,779 21 2,770 1,672 2.800 1,704 2.16 1,778 16 2,770 1,672 2.800 1,704 2.16 1,778 2.2 2,801 1,804 1 2,807 1,704 1 2,29 1,838 2.7 2,900 1,809 1 2,907 1,904 15 2,29 1,838 2.7 2,900 1,809 1 2,907 1,904 2 2,38 1,918 97 2,900 1,809 2 3,000 1,909 5 2,39 1,918 97 2,912 1,804 3,000 1,909 5 2,49 2,198 17 2,912 1,804 3,000 1,909 5 2,49 2,198 17 2,912 1,804 3,007 2,004 2,58 2,118 5,47 2,912 1,804 3,007 2,004 2,58 2,118 5,47 2,912 1,804 3,007 2,004 2,58 2,118 5,47 2,912 1,804 3,007 2,004 2,68 2,28 3,198 3,007 2,004 3,300 2,209 2,66 2,218 17 2,007 3,007 2,209 2,209 2,265 2,276 1,67 3,007 3,007 2,209 2,209 2,265 2,276 1,67 3,007 3,007 2,209 2,209 2,267	19	2,700			2.750	1.751		2,13	1.749	42	048	4.002
2,750 1,701 2,800 1,801 2,14 1,779 16 2,770 1,669 2,800 1,74, 2,16 1,778 2,1 2,775 1,724 2,800 1,74, 2,10 1,778 2,1 2,910 1,829 1 2,976 1,979 11 2,28 1,885 2,2 2,910 1,829 1 2,976 1,979 11 2,28 1,887 2,2 2,910 1,829 1 2,976 1,979 11 2,38 1,978 2,2 2,900 1,84, 2,970 1,979 2,37 1,978 2,2 2,900 1,84, 2,970 1,979 5 2,37 1,978 2,2 2,900 1,84, 2,970 1,979 5 2,37 1,978 2,2 2,912 1,874 3,000 1,949 5 2,45 2,138 3,2 2,925 1,874 3,000 1,949 2,245 2,138 4,7 2,925 1,874 3,000 1,949 2,245 2,138 4,7 2,925 1,874 3,000 1,949 2,245 2,138 4,7 2,925 1,874 3,000 2,349 2,26 2,29 3,18 3,20 2,32 3,30 2,	26	2,700						2,11	1,729	72	023	
2,775 1,669 2,800 1,749 2,15 1,748 14, 2,900 1,749 2,16 1,778 2,16 1,778 2,16 1,778 2,10 1,778 2,10 1,778 2,10 1,778 2,10 1,778 2,10 1,778 2,10 1,778 2,10 1,778 2,10 1,778 2,10 1,778 1,10 1,778 2,10 1,879 11 2,28 1,1878 2,178 2,10 1,879 11 2,28 1,1878 2,10 1,879 11 2,28 1,1878 2,10 1,280		2,700			2,800	1.801		2,14	1.759	16	058	4.042
2,775 1,724 2,800 1,749 2,16 1,758 26 2,812 1,724 2,850 1,779 2,18 1,778 2,1 2,900 1,829 1 2,975 1,974 1,2 2,39 1,888 27 2,910 1,839 1 2,975 1,924 15 2,39 1,988 27 2,900 1,849 2 3,000 1,949 2 2,38 1,988 27 2,900 1,849 3 3,000 1,949 2 2,39 1,988 37 2,900 1,849 3 3,000 1,949 2 2,49 1,988 37 2,912 1,874 3,000 1,949 2 2,49 1,988 37 2,925 1,874 3,000 1,949 2 2,45 2,138 37 2,926 1,874 3,000 1,949 2 2,45 2,138 37 2,926	11	2.750			2,800	1.749		2.15	1.748	77	6200-	¥.001
2,812 1,761 2,850 1,799 2,18 1,778 21 2,290 1,349 1 2,290 1,349 2 2,29 1,888 24 2,290 1,349 2 2,29 1,328 2,290 1,349 2 2,29 1,328 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 1,349 2 2,290 2,290 1,349 2 2,290 2,	00	2.775			2,800	1.749		2,16	1.758	26	034	6000-
2,482 1,761 2,880 1,779 1,2.28 1,888 27 2,290 1,889 11 2,280 1,879 11 2,28 1,888 27 2,290 1,889 11 2,290 1,889 11 2,290 1,889 11 2,290 1,889 11 2,290 1,889 11 2,290 1,889 11 2,290 1,889 11 2,290 1,889 12 2,290 1,889 12 2,290 1,889 13 2,290 1,889 13 2,290 1,889 13 2,290 1,889 13 2,290 1,889 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 1,890 13 2,290 1,890 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890 13 2,290 1,890	25							2.18	1.778	な		
2,900 1,82,9 1 2,950 1,1879 11 2,28 1,1878 58 2,913 1,862 1 2,950 1,1879 11 2,28 1,1878 58 2,930 1,869 1 3,000 1,924 6 2,32 1,938 97 2,900 1,82,9 3,000 1,92,9 4 2,33 1,938 97 2,912 1,871 2,900 1,999 5 2,45 2,003 1,998 2,45 2,912 1,871 2,925 1,871 3,000 1,999 5 2,45 2,438 1,978 2,45 2,912 1,871 3,000 1,949 5 2,45 2,138 3,7 2,925 1,871 3,000 1,949 5 2,45 2,138 4,7 2,925 1,871 3,000 1,949 5 2,45 2,138 4,7 2,925 1,871 3,000 1,949 5 2,45 2,138 4,7 2,925 1,871 3,000 1,949 5 2,45 2,492 1,871 3,000 1,949 5 2,45 2,492 1,871 3,000 1,949 5 2,492 1,871 3,000 1,949 5 2,492 1,871 3,400 2,349 2,465 2,228 3,47 3,400 2,349 2,469 2,469 2,228 3,47 3,400 2,349 2,469 2,469 2,228 3,400 2,349 2,497 2,498 2,288 1,499 2,499		2,812	1,761		2,850	1.799		2.29	1.838	27	127	089
2.993 1.882 1 2.975 1.924 15 2.33 1.928 94, 2.300 1.899 1 3.000 1.949 4 2.38 1.978 97, 2.300 1.849 2 2.300 1.949 4 2.38 1.978 97, 2.390 1.849 2 2.300 1.949 4 2.38 1.978 27, 2.925 1.874 2.930 1.999 5 2.39 1.988 1.978 27, 2.925 1.874 2.038 17, 2.925 1.874 2.038 17, 2.925 1.874 3.000 1.949 5 2.45 2.46 2.39 1.78 2.925 1.874 3.000 1.949 2.45 2.45 2.188 2.188 2.189 2.925 1.877 3.000 1.949 2.45 2.45 2.189 1.75 2.921 1.861 3.007 2.349 2.45 2.45 2.189 1.75 2.921 2.45 2.45 2.45 2.489 1.877 3.000 1.949 2.45 2.45 2.489 1.877 3.000 1.949 2.45 2.45 2.288 3.289 3.300 2.349 2.45 2.45 2.288 3.289 3.300 2.349 2.45 2.45 2.288 3.289 3.300 2.349 2.45 2.288 3.289 3.300 2.349 2.45 2.45 2.288 1.87	100	2,900	1.849	-	2.950	1.899	11	2,28	1.878	200	029	4.021
2,900 1,839 1 3,000 1,942 8 2,32 1,913 97 2,900 1,849 2 3,000 1,949 2 2,36 1,978 8 2,32 2,900 1,849 2 3,000 1,949 2 2,38 1,778 2,925 1,874 2,925 1,874 3,000 1,949 5 2,45 2,498 3,295 1,874 2,925 1,874 3,000 1,949 5 2,45 2,48 2,138 2,45 2,925 1,874 3,000 1,949 2,45 2,48 2,138 2,47 2,925 1,874 3,000 1,949 2,45 2,48 2,138 2,47 2,912 1,874 3,000 1,949 2,48 2,48 2,188 2,47 2,49 2 1,874 3,400 2,044 3,300 2,249 2,69 2,228 3,228 3,228 3,225 2,004 3,300 2,249 2,249 2,269 2,228 3,228 3,228 3,228 3,228 3,228 3,239 2,288 3,228 3,239 2,289 2,	15	2.913	1,862	-	2.975	1.924	15	2.33	1.928	76	990-	700
2,900 1,845 3 3,000 1,949 2 2,36 1,998 49 2,920 1,845 2 3,000 1,949 5 2,39 1,988 27 2,920 1,845 3,000 1,949 5 2,34 1,988 32 2,920 1,893 3,000 1,999 5 2,44 2,038 17 2,920 1,899 3,000 1,949 5,45 2,138 39 2,920 1,874 3,000 1,949 2,48 2,198 34 2,921 1,874 3,000 1,949 2,48 2,198 34 2,922 1,874 3,000 2,349 2,66 2,229 34 3,000 1,949 3,400 2,349 2,66 2,228 34 3,202 2,004 3,300 2,249 2,67 2,269 16	22	2.950	1.899	r-l	3.000	1.949	100	2.32	1.918	26	019	4.031
2,900 1,835 2 3,000 1,929 4 2,38 1,078 27 2,912 1,874 3,050 1,999 5 2,34 1,978 27 2,912 1,874 3,050 1,999 5 2,45 2,098 17 2,925 1,874 3,000 1,949 2,45 2,138 1,187 2,925 1,874 3,075 2,024 2,58 2,178 5,47 2,938 1,837 3,075 2,024 2,59 2,188 1,187 3,000 1,949 2,459 2,289 1,77 3,000 1,949 3,400 2,349 2,46 2,228 1,59 3,100 2,049 3,400 2,349 2,46 2,228 1,59 3,407 2,004 3,350 2,249 2,67 2,283 1,59	29	2,900		~	3,000	1.949	N	2.36	1.958	67	109	-°000
2.922 1.874 3.050 1.999 5 2.39 1.988 32 2.925 1.874 3.050 1.999 5 2.45 2.038 32 2.45 2.038 32 2.45 2.038 32 2.925 1.874 2.038 1.874 2.925 1.874 2.024 2.54 2.138 3.77 2.925 1.874 3.075 2.024 2.50 2.198 47 2.912 1.881 3.075 2.024 2.60 2.198 47 2.60 2.293 1.877 2.65 2.228 3.228 3.200 1.849 3.400 2.349 2.349 2.65 2.228 3.228 3.2378 2.65 2.228 3.228 3.2075 2.054 2.390 2.399 2.67 2.288 3.289 3.4075 2.024 3.300 2.249 2.67 2.288 3.289 3.4075 2.024 3.300 2.249 2.67 2.288 3.289 3.4075 2.024 3.300 2.249 2.67 2.288 3.289 3.4075 2.024 3.300 2.249 2.67 2.288 3.289 3	lay 6	2,900		CV.	3.000	1.949	7	2,38	1.978	27	129	029
2,972 1,851 3,050 1,999 2,44 2,038 17 2,925 1,874 3,000 1,949 2,45 2,1038 17 2,925 1,874 3,000 1,949 2,58 2,178 5,4 2,912 1,851 3,075 2,024 2,59 2,189 4,7 2,912 1,851 2,000 1,949 2,40 2,29 1,18 3,000 1,949 3,400 2,349 2,66 2,278 3,278 3,278 3,278 2,078 2,000 1,949 2,000	13	2.925			3.050	1.999	5	2.39	1.988	32	114	f.011
2,950 1,899 2,45 2,004 33 2,925 1,874 3,000 1,949 2,54 2,138 5,1 2,932 1,874 3,075 2,024 2,59 2,138 4/7 2,912 1,864 2,203 1,204 2,60 2,129 1,7 3,000 1,949 3,400 2,349 2,65 2,228 3,238 3,2 3,100 2,049 3,400 2,349 2,65 2,228 3,238	20	2.912			3.050	1.999		2044	2,038	17	177	039
2,925 1,874 3,000 1,949 2,54 2,138 33 2,245 1,874 2,895 1,874 2,895 1,874 2,895 1,877 2,912 1,863 3,0075 2,024 2,99 2,189 4,7 2,99 2,189 1,7 2,99 1,187 2,99 1,198 1,7 2,600 1,949 2,409 2	27	2.950						2.45	2.048	33	149	
2.925 1.874 2.024 2.58 2.178 54 2.178 24 2.58 2.178 54 2.58 2.178 54 2.58 2.178 54 2.58 2.178 54 2.58 2.188 47 2.58 2.188 47 2.59 2.188 47 2.50 2.188	Fune 3	2.925			3.000	1.949		2.54	2,138	33	264	189
2,888 1,837 3,075 2,024 2,59 2,188 47 2,912 1,884 47 2,912 1,884 47 2,912 1,877 2,00 1,949 3,400 2,349 2,68 2,278 5,48 3,207 2,074 3,300 2,249 2,67 2,285 16	10	2.925						2,58	2,178	54	304	
2,912 1,861 2,291 33 2,400 1,949 2,60 2,299 1,7 3,100 2,449 3,400 2,349 2,68 2,278 3,7 3,100 2,449 2,69 3,400 2,349 2,68 2,278 3,7 3,105 2,077 3,350 2,289 2,67 2,288 1,5 3,075 2,004 3,300 2,249 2,67 2,288 1,5	17	2,838			3.075	2.024		2.59	2,188	47	351	164
2,000 1,947 2,60 2,198 17 3,000 1,949 3,400 2,349 2,65 2,228 54, 3,100 2,047 3,390 2,299 2,68 2,278 45 3,075 2,024 3,390 2,249 2,67 45	77	2,912						2.60	2.291	33	430	
3,000 1,349 2,340 2,349 2,453 2,228 54, 3,125 2,074 3,350 2,289 2,48 2,278 3,27 3,125 2,074 3,350 2,289 2,48 2,47 2,283 16	July 1	2.938						2.60	2,198	17	311	
3.100 2.049 3.400 2.349 2.66 2.278 32 3.125 2.074 3.350 2.239 2.68 2.278 4.5 3.075 2.004 3.300 2.249 2.67 2.278 16	00	3.000						2.63	2,228	275	279	
3,125 2,074 3,350 2,299 2,63 2,278 45 3,0075 2,024 3,300 2,249 2,67 2,263 16	15	3,100			3.400	2,349		2.66	2,258	32	209	4.091
3,075 2,024 3,300 2,249 2,67 2,263 16	22	3.125			3.350	2.299		2,68	2,278	4.5	204	4.021
	53	3.075			3.300	2.249		2.67	2,263	16	277	019

Cash Fries Carlot : Cash Fries Carlot Ca	Week Cash Pri Week Cash Pri Wegamings Actual Wegamings Actual Wegamings	703	3			INCHARGE D	74.15			Manage of the last
12 2,025 1,874 3,300 2,249 2,64 2,228 2 2,700 1,874 2,300 2,249 2,65 2,228 17 -3,74 19 2,900 1,874 2,300 2,249 2,24 1,978 13 -3,74 1,978	20112 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	87%	s2: Actual:		Carlot : Receipts2:	Cash Actual:	Net1 :	Carlot Receipte3	00 00	Wash.
5 2,925 1,874 83,200 82,223 30 82,225 1,874 82,238 30 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238 82,238<	115 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	874								
12 2,000 180,00 2,209 2,50 2,228 17 -2,57 2 2,925 1,874 3,250 2,159 2,24 1,938 28 2,124 2 2,925 1,874 3,120 2,159 2,24 1,938 28 2,000 3 2,925 1,874 3,125 2,074 2 2,24 1,938 28 2,000 3 2,936 1,893 3,125 2,074 2 2,24 1,888 39 2,000 4 2,938 1,931 3,000 1,949 2,22 1,878 1,674 5 2,938 1,934 2,950 1,899 2,27 1,888 84 2,000 5 2,936 1,931 3,000 1,949 2,27 1,888 84 2,000 6 2,936 2,124 2,024 2,950 1,899 2,24 1,938 30 2,000 7 2,525 2,036 2,030 2,030 2,40 1,998 30 2,000 8 2,936 2,124 2,036 2,40 1,998 16 2,000 9 2,936 2,124 2,000 2,40 1,998 16 2,000 9 2,936 2,036 2,030 2,40 1,998 16 2,000 9 2,936 2,036 2,036 2,41 1,998 16 2,000 9 2,936 2,036 2,030 2,42 1,988 16 2,000 9 2,936 2,036 2,036 2,42 1,998 16 2,000 9 2,936 2,036 2,036 2,42 1,998 16 2,000 9 2,936 2,036 2,036 2,030 2,23 1,888 8 2,000 9 2,936 2,036 2,036 2,037 2,038 1,000 2,000 9 2,936 2,036 2,036 2,030 2,037 2,038 1,000 2,000 9 2,936 2,036 2,036 2,036 2,037 2,038 1,000 2,000 9 2,936 2,036 2,036 2,036 2,037 2,038 1,000 2,000 9 2,936 2,036 2,036 2,036 2,037 2,038 1,000 2,000 9 2,936 2,036 2,036 2,036 2,036 2,037 2,038 1,000 2,000 9 2,936 2,036 2,	28 2985 29 2985 20 20 20 20 20 20 20 20 20 20 20 20 20 2	678	\$3,300	\$2,249		\$2.64	\$2,238	8	\$36t	\$4.01
10	28 2925 28 2925 29 2925 29 2925 29 2925 29 2925 20 20 20 20 20 20 20 20 20 20 20 20 20 2	oftens a	3,300	2,249		2,63	2,228	17	379	4.02
26 2.995 1.874 3.259 2.199 1.93 3.8 1.938 3.8 1.064 2 2.995 1.874 3.129 2.199 1.061 1.861 3.0 1.063 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.093 3.6 1.003 3.6 1.093 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 3.6 1.003 <	26 2.995 27 2.995 28 2.995 28 2.995 28 2.995 28 2.995 29 2.995 20 20 20 20 20 20 20 20 20 20 20 20 20 2	5/16	3.250	2,199		2.53	2,128	13	254	4.07
2 2.925 1.861 3.159 2.099 10 2.27 1.868 36 6.006 16 2.935 1.861 3.159 2.099 10 2.21 1.868 36 6.006 2.935 1.891 3.125 2.074 7 2.26 1.893 16 6.016	2 2,2925 2 2,925 2 3,912 2 3,912 2 3,912 2 3,925 2	874	3.250	2,199		2.34	1.938	28	790"-	4.261
9 5.912 1.861 3.125 2.974 5 2.16 1.768 90 7.053 2.956 1.874 3.125 2.974 2 2.16 1.758 90 7.053 3 2.956 1.874 3.125 2.074 7 2.26 1.858 155 7.041 3 2.956 1.909 3.105 2.974 1 2.24 1.858 124 7.071 3 2.956 1.911 3.005 1.975 3.000 1.975 2.22 1.858 184 7.167 2 2.956 2.034 2.950 1.899 2.27 1.868 187 7.181 3 3.000 1.939 2.950 1.899 2.27 1.868 187 7.181 3 2.900 2.030 2	16.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2.9 2	874	3,150	2.099	10	2.27	1,368	28	4.006	4.23
16 2.925 1.8774 3.125 2.0744 2 2.26 1.975 165 7.116 2.950 1.8774 3.125 2.0774 1 2.26 1.975 155 7.116 3.050 1.931 3.050 1.939 2.275 1.885 137 7.071 4 2.985 1.934 2.950 1.879 2.27 1.885 137 7.071 5 2.995 2.034 2.950 1.879 2.27 1.885 84 7.116 6 2.995 2.034 2.950 1.879 2.27 1.885 84 7.116 7 2.995 2.034 2.950 1.879 2.27 1.885 84 7.116 8 2.995 2.035 2.035 2.035 2.035 3.0 2.035 9 2.995 2.035 2.035 2.035 3.035 3.0 7.035 10 2.995 2.035 2.035 2.035 3.035 3.0 7.035 11 2.995 2.035 2.035 2.035 2.035 3.0 7.035 12 2.995 2.035 2.035 2.035 2.035 3.0 7.035 13 2.995 2.035 2.035 2.035 2.035 3.0 7.035 14 2.995 2.035 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 2.035 3.0 7.035 15 2.995 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 2.035 15 2.995 2.035 2.035 2.035 2.035 2.035 2.035 15 2.035 2.035 2.035 2.	23 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2.3 2	861	3.125	2.074	20	2,21	1.808	8	4.053	f.26
23 2,950 1,859 3,125 2,070 7 2,26 1,858 155 7,041 30 2,960 1,990 3,125 2,070 1 2,24 1,858 155 7,041 4 2,966 1,997 3,900 1,949 2,225 1,888 84 7,077 28 3,100 2,042 2,950 1,899 2,28 1,878 84 7,077 11 3,000 1,934 2,950 1,899 2,28 1,878 84 7,077 11 3,000 1,934 2,950 1,899 2,28 1,878 84 7,187 11 3,000 1,934 2,950 1,899 2,24 1,998 87 7,187 11 2,948 2,042 2,450 1,998 2,40 1,998 2,10 2 2,879 2,042 2,40 1,998 2,1 1,00 2 2,899 2,102 2,40	23 24 25 25 25 25 25 25 25 25 25 25 25 25 25	874	3,125	2.074	N	2.16	1.758	163	4.116	4.316
30 2.960 1,900 3.125 2.977 1,600 1,200 1,	20 2.256 20 20 20 20 20 20 20 20 20 20 20 20 20 2	608	3,125	2.074	7	2.26	1.858	155	4.041	4.216
1, 2,962 1,911 3,000 1,949 2,25 1,828 124 7,003 21, 2,962 1,937 3,000 1,949 2,25 1,828 84 7,003 21, 3,000 1,934 2,950 1,899 2,27 1,898 87 7,136 4, 2,967 1,934 2,950 1,899 2,27 1,898 87 7,136 11 3,000 1,934 2,990 1,899 32 7,003 2, 2,802 2,002 2,002 2,002 2,003 37 7,003 2, 2,803 2,003 2,003 2,003 2,40 1,998 37 7,003 2, 2,803 2,003 2,003 2,40 1,998 21 7,003 2, 2,803 2,003 2,003 2,40 1,998 10 7,003 2, 2,803 2,003 2,003 2,40 1,998 10 7,003 2, 2,803 2,003 2,003 2,40 1,998 10	21, 2, 3, 3, 3, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4, 4,	606	3,125	2.074	eri	2.24	7.838	137	4.07	4.236
11 2.998 1.97 3.950 1.999 2.25 1.858 84 7.107 28 3.100 2.034 2.950 1.999 2.27 1.858 84 7.107 4 2.005 2.034 2.950 1.899 2.27 1.868 87 7.181 13 2.000 1.934 2.950 1.899 2.27 1.868 87 7.181 13 2.001 1.934 2.042 2.40 1.998 37 7.034 2 2.895 2.036 2.41 2.008 37 7.034 2 2.895 2.036 2.41 1.998 21 7.034 2 2.897 2.036 2.40 1.998 22 7.034 2 2.997 2.036 2.046 1.998 10 7.034 2 2.998 2.046 2.40 1.998 10 7.036 2 2.998 2.068 2.068 2.41	23 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	911	3.000	1.949		2.23	1.828	124	4.083	4.12
21 3.085 2.034 2.950 1.899 2.28 1.878 88 7.156 2.950 1.899 2.271 1.868 88 7.156 2.950 1.899 2.271 1.868 88 7.156 2.950 1.899 2.271 1.868 88 7.156 2.950 1.899 2.272 1.868 88 7.156 2.950 1.899 2.272 1.868 88 7.156 2.950 2.922 2.272 2.925 2.022 2.92	21 3.085 28 3.100 27 2.888 27 2.8888 28 2.917 29 2.977 20 2.977 20 2.977 20 2.977 20 2.977	937	3,000	1.949		2,25	1,853	***	4.079	4.09J
28 3.100 2.000 2.000 1.899 2.27 1.868 87 7.181 2.000 1.995 2.27 1.868 87 7.181 2.000 1.995 2.000 1.995 2.000 1.995 2.000 1.995 2.000 1.995 2.000 1.995 2.000 1.995 2.000	28 3-100 111 2-2965 25 2-2965 25 2-2965 23 2-295 24 2-295 25 2-295 26 2-295 27 27 27 27 27 27 27 27 27 27 27 27 27 2	.034	2,950	1.899		2,28	1.878	99	4.156	4.02
4 2,905 1,934 2,34 1,998 39 11 2,912 2,000 1,998 37 1,998 37 25 2,812 2,042 2,440 1,998 37 2,400 1,998 37 25 2,817 2,008 2,440 1,998 37 2,400 1,998 37 26 2,990 2,809 2,440 1,998 32 2,400 1,998 31 27 2,990 2,090 2,090 2,440 1,998 10 2,400 1,998 10 20 2,970 2,090 2,090 2,420 1,998 16 2,420 1,998 16 20 2,970 2,009 2,009 2,420 2,420 1,998 16 2,420 1,998 16 20 2,970 2,009 2,009 2,309 2,31 1,888 8 8 21 2,590 2,009 2,009 2,31 </td <td>25 2.2950 26 2.2950 27 2.2950 28 2.2950</td> <td>670°</td> <td>2.950</td> <td>1.899</td> <td></td> <td>2.27</td> <td>1.368</td> <td>250</td> <td>4.181</td> <td>4.03</td>	25 2.2950 26 2.2950 27 2.2950 28 2.2950	670°	2.950	1.899		2.27	1.368	250	4.181	4.03
111 3,000 1,049 2,000 1,049 3,7 1,000 1,000 3,7 1,000 1,000 3,7 1,000 1,000 3,7 1,000 1,000 3,7 1,000 1,000 3,7 1,000 1,	11 3,000 22 2,592 23 2,595 16 2,595 23 2,595 23 2,595 24 2,595 25 2,595 26 2,595 27 2,595 27 2,595 28 2,595 29 2,595 20 2,5	934				2,34	1.938	20	7000-	
18 2,042 2,441 2,008 37 2 2,287 2,003 3,43 2,008 37 2 2,277 2,009 2,40 1,998 22 2 2,990 2,000 2,40 1,998 22 2 2,997 2,000 2,40 1,998 22 2 2,997 2,000 2,40 1,998 10 2 2,997 2,000 2,42 1,998 16 2 2,998 2,068 2,42 1,998 16 2 2,998 2,068 2,42 1,998 16 2 2,998 2,068 2,40 1,998 16 2 2,998 2,068 2,27 1,888 8 1 2,900 2,090 2,299 2,299 2,299 2,299 1 2,900 2,090 2,299 2,299 2,299 2,299 2,299 2,299 2,299 2,29	18 2,912 25 2,888 2 2,297 16 2,996 23 2,995 29 2,925 20 2,926 20 2,936 20 2,936 20 2,936	676				2.40	1.998	35	670-	
25 2,878 2,018 2,018 3,028 3,038 3,	25 2,888 2 2,877 16 2,950 12 2,950 23 2,950 29 2,950 6 2,950 20 2,970 20 2,970	.042				2.41	2,008	37	4.034	
2 2,295 2,005 2,40 1,996 22 16 2,990 2,212 2,40 1,996 22 23 2,995 2,096 2,40 1,996 9 29 2,995 2,096 5 2,40 1,996 10 29 2,996 2,097 2,109 1,996 16 13 2,970 2,109 2,42 1,996 16 20 2,998 2,006 2,42 1,996 16 20 2,998 2,006 2,42 1,996 16 20 2,998 2,006 2,42 1,996 16 20 2,998 2,006 2,43 1,996 16 20 2,998 2,42 1,996 16 2,42 1,996 16 20 2,998 2,006 2,099 2,299 2,271 1,896 6 20 2,999 2,099 2,099 2,287 1,848	2 2.950 16 2.950 29 2.950 29 2.925 20 2.950 20 2.930 20 2.930	010				2.43	2,028	200	010	
16 2.950 2.080 2.080 2.40 1.998 22 23 2.950 2.000 2.00 1.998 22 2.050 2.	23 2.950 23 2.955 29 2.925 20 2.925 20 2.950 20 2.950	:.005				2.40	1.998	77	4.000	
16 2,205 2,405 1,4996 19 29 2,205 2,096 9 29 2,205 2,096 10 29 2,205 2,096 10 13 2,970 2,100 2,41 1,998 16 20 2,996 2,000 2,42 1,998 16 20 2,996 2,000 2,42 1,998 16 20 2,998 2,42 1,998 16 20 2,998 2,42 1,998 16 20 2,998 2,42 1,998 18 20 2,998 2,43 1,998 18 20 2,998 2,43 1,998 18 20 2,998 2,20 2,40 1,998 8 20 2,998 2,27 1,848 8 20 2,998 2,28 1,858 6 20 2,998 2,28 2,28 1,858 6	16 2.950 23 2.925 29 2.925 13 2.970 20 2.936	080				2.40	1.998	22	7.085	
23 2,255 2,096 5 2,400 1,993 10 2,205 2,205 2,096 10 2,205 2,205 2,096 10 2,205 2,20	23 2.925 29 2.925 6 2.950 13 2.970 20 2.938	121				2.40	1.998	0	4.123	
29 2.955 2.055 15 6 2.950 2.000 2.41 1.998 16 13 2.970 2.100 2.43 1.998 16 20 2.338 2.068 1.6 1.978 16 27 2.996 2.068 2.40 1.978 8 3 2.900 2.079 2.27 1.848 8 17 2.900 2.030 2.27 1.848 2 17 2.900 2.030 2.28 1.856 6	29 2.925 6 2.950 13 2.970 20 2.938	960°			5	2.40	1.993	10	4.098	
6 2.950 2.030 2.030 2.030 2.030 2.041 1.988 16 2.050 2.030 2	6 2,950 13 2,970 20 2,938	°055				2.41	1.998	15	4.057	
6 2,990 2,080 2,080 2,41 1,988 16 2,290 2,090 2,000 2,	6 2,950 13 2,970 20 2,938									
13 2,970 2,100 20 2,938 2,068 1.6 27 2,938 2,068 2,048 2,240 1.978 8 3 2,900 2,030 2	2.938	.080				2.41	1.988	16	¥.082	
20 2.938 2.068 2.40 13 7.2 2.008 13 7.2 2.938 2.008 13 7.2 2.938 2.008 2.000 2	2,938	2,100				2042	1.998	16	×.102	
27 2,938 2,068 2,068 2,40 1,978 8 7 2,80 1,057 2,00 1,078 8 1,057 2,00 1,00 2,00 2,00 2,27 1,088 8 1,057 2,27 1,088 8 1,057 2,00 2,00 2,00 2,00 2,00 2,00 2,00 2,0		2,068				2.43	2.003	13	4.060	
3 2,970 2,090 2,090 2,271 1,888 8 10 2,870 2,005 110 2,878 2 1	2.938	.068				2.40	1.978	60	×.090	
2.875 2.005 2.030 2.030 2.030 2.030 2.030 2.030 2.030 2.030	3 2,900	.030				2,31	1.888	00	4.142	
2,900 2,030	2.875	5002				2.27	1.848	CV 1	4.157	
	2.900	060*				2,28	1.858	01	F-172	

Begiming	Week r Cash P Beginning: Actual:	Cash Price :	Carlot : Cash Price Receipts?: Actual: Notl	Cash Price Actual: Notl	Notl :	Carlot : Cash Receipts?: Actual	r Cash	Price :	Carlot : Receipts3:	3: Calif.: Wash	: Wash.
1957 Mar 3	91	48		-00	-04		\$2,29	\$1.868	15	-19	40
		-			_		2.32	1,898	6		
17							20,32	1.898	8		
24							2.32	1.898	6		
31							2,32	1.898	6		
Apr 7							2,32	1.898	77		
77							2,30	1.878	77		
27							2.30	1.878	10		
80							2.28	1.858	35		
Yay 5			1				2.26	1.838	37		
12	2,625	1.796	9				2,18	1.758	28	4.033	
19	2.575	1.726					2,20	1.778	37	1.032	
26	2,575	1.746					2.21	1.788	10	042	
June 2	2,375	3,546					2,21	1.788	25	272	
6	2.575	1.746					2,19	1.768	27	022	
16	2,575	1,746				7	2.13	1.708	77	4.038	
23	2,625	1.796				9	2.17	1.748	30	£,048	
2	2,600	1.77		2.900	1.798	7	2.19	1.768	34	4.003	4.030
July 7	2.575	1.746		2.925	1,823	CV	2.20	1.778	31	032	7007
	2.550	1.721		2,938	1.836	pref	2,25	1.828	27	107	7.00
7	2.550	1.721		2.975	1.873	m	2.26	1.838	777	117	4.035
t0	2.550	1.721		2.975	1.873	0	2,25	1,828	1,2	107	7007
7 200	2,500	1.671		2,925	1.823	50	2,10	1.678	31	007	4.14
	2,500	1.671		2,850	1.746	2	2,11	1,688	17	017	4.05
100	2,500	1.67		2.825	1.723	2	2.07	1.648	16	4.023	4.07
25	2,500	1.671		2,750	1.607		1.80	1,362	15	4.309	4.24
Sent 1	2,500	1.671	100	2,750	1.607	2	1.75	1,312	13	4.359	4.29
	2,500	1.671	60	2,750	1.607	4	1.05	1.412	19	4.259	4.19
15	2,500	1.671		2,750	1.607	60	1.68	1.272	62	4-429	4.36
22	2,375	1.546		2,500	1.357	15	1.65	1.212	65	4-334	4.14
20	202 0	7 100	M C	2 / 60	2 200		3 63	1 100	101	1 221	617

		Califo	printa	**	Washin	rton	04	Kansas	City	84	Differen	tial4
Week		Cash	Price :	Carlot :	Cash	Price :	Carlot :	Cash	Price :	Carlot :	84	
Begin	guing	: Actual:	Met. :	Receipts21	00	Netl :	Receipts2:	Actuals	Net1 :	Receipts3:	Calif.:	Wash
1957												
Oct	9	\$2,350	\$1.521	1.7	40	43	77	\$1.57	\$1,132	193	\$4.389	60
	13	2.325	1.496	15	2,450	1.307		1.73	1.292	67	f.204	4.015
	20	2.350	1.521	2	2-450	1.307		1.90	1.462	2/2	4.059	155
	8	2.350	1.521	77	2.450	1.307		1.60	1.162	5	4.359	4.145
Nov	. 60			8				1.69	1.252	334		
	10	2375	3.546	26	2.450	1,307		1.62	1,182	337	4.364	4-125
	17	2,375	1.546	75	2-475	1.332		1.8	1.352	575	4.184	030
	24	2,375	1.546	152	2.525	1.382		1.77	1.272	892	4.274	4.110
Dog	-	2,375	1.546	278	2.550	1.407		1.73	1.292	1,536	4.254	4.115
	100	2.450	1.621	383	2.550	1.407		1.81	1.372	1,730	4.249	4.035
	5	2.7.2	1.646	373	2,600	1.457		1.33	1.392	1,070	4.254	4.065
	22	2,450	1,621	325	2,600	1.457		1.79	1.352	167	£.269	4-105

Lactual cash price minus freight cost from Group B. (Freight cost used appear in Tails 3.)
An number of reilrond cars received from Group B.
Froil receives the received in Kansas Cliffe above (A) or below (-) Kansas Cliffe net cash prices above (A) or below (-) Kansas Cliffe net cash prices.

Comparison of grain sorghum movements to cash price differences from freight rate Group C. in Kansas to California, Washington, and Kansas City. Table 9.

77		Wash.																								115	085	175	175		175
:Differential4				F325 &	315	275	-,325		367	365		401	265	307	360	405	50%	205	185	-195	205	-,125	115	255							780
:Di	Carlot :	Receipts calif. :									to																				77.5
	: Ca	: Rec																			56 188										
Kansas City	Cash Price	. Net-		\$2.076	2.016	1.976	1.976	1.926	1.856	1.916	1.9	1.946	10.00	400	1.8	1.9	1.9	1.7	1.6	1.6	1.756	1.6	1.6	1.756	1.826	1.816	1.836	1.816	1.816		1.316
	Cash	Actual	H	\$2.37	2,31	2.27	2.27	2,22	2.15	2,21	2.24	2.24	2.11	2.14	2,18	2,25	2,25	2.00	1.98	1.99	2.05	1.97	1.96	2.05	2,12	2,11	2,13	2,11	2,11		2.07
**	Carlot :	Receipts': Actual: Net-																	9		ın				R	3	٦	7			
gton	rice :	Net- s		40-																						1.701	1.751	1.751	1.751		1.751
Washington	Cash Price	Actual:		40																						2,700	2.750	2.750	2,750		2.750
**	Carlot :	Receipts : Actual: Net1												2								-	4			7		2			10
กรู้ล		40		\$1.751	1.701	1.701	1.651		1.489	1.551		1.545	1.551		1.526	1.551	1.551	1.501	1.501	1,501	1.551	1,551	1.551	1.501	1.576	1.588	1,601	1.526	1.651		1.676 1
California	Cash Price	Beginning : Actual: Net-					2,650		2,438	2,550		2.544	2.550	2.548	2,525	2.550	2.550	2.500	2,500	2,500	2.550	2.550	2.550	2.500	2,575	2.587	2,600	2,525	2,650		2.688
-		: Bulu		3	10	17	27	31	7	77	21	28	7	11	13	25	N	6	16	23-	30	9	13	20	27	7	11	138	25		→ 1 00
		Begir	1955	July					Aug	3			Sept				Oct					Nov				Dec				1956	Jan

Cash Price Carlot Cash Price Carlot Cash Price			s Califo	ornia		: Washington	rton	66	Kansas (City		Differential4	tial4
1.5 1.700 1.701 2 2.750 1.751 11 \$2.06 1.766 79 \$065 2.750 1.751 11 \$2.06 1.776 51 075 075 2.750 1.751 12 2.077 1.776 51 075 2.775 1.751 12 2.077 1.776 51 075 2.775 1.751 2 2.077 1.776 51 075 2.775 1.751 2 2.077 1.776 51 075 2.775 1.775	Neek nu	ing	. 4	Met1 :		: Actual:	Netl 1	Receipts2:	Actual:		Receipte3:	Calif.:	Wash.
15 2.700 1.701 3 2.750 1.751 11 2.06 1.76 79 2.075 2.070 1.776 2.075 2.770 1.771 12 2.077 1.776 2.077	99												
22 2.700 1.701	-	15	2.700	\$1.701	67	\$2.750	\$1.751	11	\$2.06	\$1.766	62	\$065	8015
25 2.700 1.701 6 2.750 1.771 9 2.07 1.776 51075 12 2.670 1.701 1 2 2.750 1.771 2 2.07 1.776 51075 13 2.670 1.701 1 2 2.750 1.771 2 2.00 1.776 2.0 1.776 14 2.700 1.701 1 2 2.750 1.771 2 2.00 1.776 2.0 1.776 15 2.700 1.701 1 2 2.750 1.771 2 2.00 1.776 1.71 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 18 2.775 1.724 15 2.300 1.771 1 2.11 1.886 4.7115 2.295 1.872 2 2.300 1.303 2 3.000 1.949 5 2.13 2.001 97112 2.295 1.874 1 3.000 1.949 5 2.23 2.001 97123 2.295 1.874 1 3.000 1.949 5 2.23 2.011 97123 2.295 1.874 2 3.000 1.949 5 2.044 2.131 1.7207 2.295 1.874 2 3.000 1.949 7 2.044 2.131 1.7207 2.295 1.874 2 3.000 1.949 1 2.049 2 2.56 2.31 1.7207 2.295 1.874 2 3.000 1.949 1 2.049 2 2.56 2.31 1.7207 2.295 1.874 2 3.000 1.949 1 2.049 2 2.56 2.31 1.7207 2.295 1.874 2 3.000 1.949 1 2.040 2.249 2.250 2.271 3.7207 2.295 1.874 2 3.000 1.949 2 2.249 2.250 2.271 3.7207 2.295 1.874 2 3.000 1.949 2 2.249 2.250 2.271 3.7207 2.295 1.874 2 3.000 1.949 2 3.004 2.249 2.250 2.271 3.7207 2.295 1.874 2 3.000 1.949 1 3.000 2.249 2.250 2.271 3.7207 2.205 2.207 2		22	2.700	1.701	7	2.750	1.751	6	2.07	1.776	52	075	025
2.770 1.771 2.775 1.771 6 2.09 1.776 2.176 1.771 6 2.09 1.776 2.106 2.106 2.106 2.106 2.106 2.106 2.107 <td></td> <td>50</td> <td>2,700</td> <td>1,701</td> <td>9</td> <td>2,750</td> <td>1.751</td> <td>6</td> <td>2.07</td> <td>1.776</td> <td>51</td> <td>075</td> <td>025</td>		50	2,700	1,701	9	2,750	1.751	6	2.07	1.776	51	075	025
12 2.667 1.676 2.750 1.771 2 2.00 1.796 4.7 -1.10 2.470 1.701 1 2.750 1.771 2 2.00 1.796 4.7 -1.10 2.470 1.701 4 2.800 1.801 11 2.11 1.806 21 -1.15 2.5 2.700 1.701 4 2.800 1.801 11 2.11 1.806 21 -1.15 2.5 2.701 1.602 2 2.800 1.701 11 2.11 1.806 21 -1.17 2.5 2.900 1.803 1 2.200 1.703 22 2.80 1.703 21 2.10 1.801 20 2.10 2.5 2.900 1.803 1 2.900 1.903 28 2.801 1.901 2.70 2.5 2.900 1.803 1 2.900 1.903 28 2.801 1.901 2.70 2.5 2.900 1.803 1 2.900 1.903 28 2.901 1.901 2.70 2.5 2.900 1.803 1 2.900 1.903 2 2.20 1.901 2.70 2.5 2.900 1.803 1 2.900 1.903 2 2.20 2.70 2.900 1.803 1 2.900 1.903 2 2.20 2.70 2.900 1.803 1 2.900 1.903 2 2.20 2.70 2.900 1.803 1 2.900 1.903 2 2.20 2.70 2.900 1.803 1 2.900 1.903 2.900 2.903 2.900 2.		ıc	2.200	1.707	0	2,750	1,751	9	2.09	1.796	23	095	045
19 2,700 1,701 1 2,750 1,751 2 2,11 1,836 42 -1,15 1,836 42 -1,15 1,836 42 -1,15 1,836 42 -1,15 1,836 1,		30	2.675	1.676		2.750	1.757	2	2.09	1.796	17	120	045
26 2,700 1,701 16 2,800 1,701 1 2,11 1,816 21 1,115 2,117 1,125		10	2.700	1.707	,-	2.750	1,751	· cv	2.13	1.836	42	135	085
4. 2.770 1.701 4. 2.800 1.801 11 11.45 <td></td> <td>200</td> <td>2,700</td> <td>1.707</td> <td>16</td> <td></td> <td></td> <td>e</td> <td>2.11</td> <td>1,816</td> <td>77</td> <td>115</td> <td></td>		200	2,700	1.707	16			e	2.11	1,816	77	115	
1		7	2,700	1,701	7	2,800	1.801	11	2.14	1.8%6	16	145	045
18 2.775 1.724 15 2.350 1.745 15 1.651 165 1.651 165 1.651 165 1.651 165 1.651 165 1.651		11	2,750	1.669	100	2.800	1.729	77	2,15	1.816	77	147	067
1 2,812 1,761 2 2,350 1,799 15 2,18 1,971 21 2,200 1,849 7 2,990 1,399 22 2,299 1,991 2 2,299 1,994 2 2,299 1,991 2 2,299 1,991 2 2,299 1,892 2 2,299 1,991 2 2,299 1,892 2 2,299 1,892 2 2,299 2,		200	2,775	1.724	15	2,800	1.749	0	2.16	1.851	56	127	102
1 2,882 1,761 6 2,880 1,799 21 2,28 1,971 2,82 1,92 1,93		25			0			15	2,13	1.871	21		
8 2,970 1,845 7 2,950 1,899 28 2,28 1,971 94 -1,192 2 2,970 1,845 4 3,000 1,949 4 2,25 2,011 94 -1,192 3 2,970 1,879 4 3,000 1,949 4 2,25 2,011 94 -1,192 4 2,970 1,879 4 3,000 1,949 4 2,25 2,011 97 -1,192 5 2,970 1,874 7 3,090 1,999 2 2,48 2,011 17 -2,22 5 2,975 1,874 7 3,090 1,999 2 2,44 2,131 17 -2,22 5 2,975 1,874 7 3,090 1,999 3 2,45 2,231 37 -2,27 6 2,975 1,874 7 3,000 1,949 3 2,45 2,231 37 -2,47 7 2,888 1,877 3,000 1,949 3 2,45 2,231 37 -2,47 8 3,000 1,849 7 3,000 2,349 6 2,66 2,71 32 -3,27 9 3,000 1,849 3,400 2,349 6 2,66 2,71 32 -3,27 9 2,975 1,874 3,300 2,249 2,64 2,311 17 -4,47 9 3,000 1,849 3,400 2,249 2,64 2,311 17 -4,47 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,47 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,47 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,47 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,47 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,492 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,492 9 3,000 1,849 3,300 2,249 2,64 2,311 17 -4,492 9 3,000 1,849 3,000 2,249 2,64 2,311 17 -4,492 9 3,000 1,849 3,000 2,249 3,341 17 -4,492 9 3,000 1,849 3,000 2,249 3,341 17 -4,492 9 3,000		-	2,812	1.767	100	2.850	1.799	72	2.29	1,981	27	220	-183
15 2,913 1,862 6 2,975 1,924 16 2,33 2,021 94 1,195 22 2,990 1,849 4 3,000 1,949 5 2,382 2,011 94 1,125 24 2,990 1,849 3 3,000 1,949 5 2,38 2,011 97 1,122 25 2,990 1,849 3 3,000 1,949 5 2,38 2,011 37 1,222 26 2,990 1,849 1 3,000 1,949 5 2,244 2,131 17 1,222 27 2,990 1,899 2 2,444 2,131 17 1,222 28 2,991 1,874 3 3 0,000 1,949 2 2,44 2,131 17 1,222 21 2,992 1,874 3 3,000 1,949 2 2,44 2,131 17 1,222 21 2,992 1,874 3 3,000 1,949 2 2,44 2,131 17 1,444 24 2,131 1,861 3 3,000 1,949 2 2,44 2,131 17 1,444 24 2,131 1,861 3 3,000 1,949 2 2,44 2,131 33 1,444 24 2,131 1,861 3 3,000 1,949 3 2,45 2,591 17 1,444 24 2,131 2,138 1,837 3 3,000 2,349 6 2,64 2,371 34 17 1,442 25 2,132 2,134 2,134 3,300 2,249 6 2,64 2,371 35 1,492 26 2,132 1,874 3,300 2,249 6 2,64 2,371 36 1,537 37 2,492 27 2,132 1,874 3,300 2,249 2,64 2,381 16 1,537 3,447 2,200 1,849 3,300 2,249 2,64 2,381 16 1,547 2,200 1,849 3,300 2,249 2,64 2,381 17 1,492 2,341 17 1,492 2,3		1 00	2.900	1.879	2	2.950	1.899	28	2.28	1.971	53	122	072
22 2.950 1.889 4 3.000 1.949 2 2.32 2.011 97 -112 26 2.950 1.849 3 3.000 1.949 4 2.35 2.011 97 -102 13 2.950 1.849 4 2.35 2.011 97 -102 27 2.950 1.899 2 2.39 2.445 2.131 17 -270 27 2.955 1.874 3 3.000 1.999 3 2.445 2.131 17 -270 10 2.955 1.874 3 3.000 1.999 3 2.445 2.131 17 -270 11 2.955 1.874 3 3.000 1.949 3 2.45 2.271 3.1 -2.27 12 2.955 1.874 3.000 1.949 2.546 2.540 2.371 3 -2.414 13 3.000 1.849 2.000 2.		15	2.913	1.862	. 40	2.975	1.924	16	2.33	2.021	76	159	097
29 2.950 1.245 3 3.000 1.945 4 2.35 2.051 1.59222 1.25 2.950 1.245 3 2.001 1.245 3 2.001 1.245 2 2.25 1.244 2.25 1.244 3.202 1.299 2 2.295 2.001 3.2272 2.295 1.374 3 2.090 1.999 2 2.295 2.001 3.2272 2.295 1.374 3 2.090 1.999 2 2.295 2.244 2.141 3.7222 1.25 2.295 1.374 3 2.090 1.999 2 2.245 2.241 33 1.7222 1.25 2.295 1.374 3 2.295 1.244 2.141 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.202 1.247 3.2 2.292 1.247 3.2 2.292 2.249 2.264 2.291 3.2 2.292 2.292 1.247 3.2 2.292 2.292 1.247 3.2 2.292 2.292 1.247 3.2 2.292 2.292 2.292 1.247 3.2 2.292 2.292 2.292 1.247 3.2 2.292		32	2,950	1.899	7	3,000	1.949	ex	2.32	2,011	26	-,112	062
6 2,490 1,826 3,000 1,949 5 2,33 2,077 27 -207 20 2,925 1,874 7 3,000 1,999 2,245 2,031 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 32 -207 </td <td></td> <td>30</td> <td>2,900</td> <td>1.849</td> <td>en en</td> <td>3,000</td> <td>1.949</td> <td>7</td> <td>2.36</td> <td>2,051</td> <td>67</td> <td>202</td> <td>-,102</td>		30	2,900	1.849	en en	3,000	1.949	7	2.36	2,051	67	202	-,102
13 2,955 1,9574 7 3,090 1,999 2 2,444 2,131 17 -2707 2,292 1,957 1,957 2 2,444 2,131 17 -2707 2,292 1,974 3 2,000 1,999 3 2,444 2,131 17 2,242 1,974 3 3,000 1,949 3 2,444 2,131 17 2,444 3,200 1,949 3 2,444 2,131 17 2,444 3,200 1,949 3 2,444 2,544 3,201 17 -4,144 3,200 1,949 3,440 2,449 3,440 2,449 3,440 2,449 3,440 2,449 3,440 3,4		9	2,900	1.849	, en	3,000	1.949	100	2,33	2.071	27	222	122
2 2.912 1.861 10 3.050 1.999 2.44, 2.131 17270 2 7.250 1.874 3 3.000 1.999 2.45, 2.131 172.2 10 2.895 1.874 3 3.000 1.999 2.45 2.414 33377 2 2.895 1.874 3 3.000 1.999 2.45 2.871 54397 2 2.895 1.877 3.007 2.024 2.69 2.931 334.42 1 2.896 1.887 3.000 2.349 6 2.69 2.31 354.42 2 3.100 2.049 3.400 2.349 6 2.66 2.31 35372 2 3.125 2.077 2.049 3.300 2.249 6 2.66 2.31 35372 2 2.925 1.874 3.300 2.249 2.66 2.91 16377 2 2.900 1.849 3.300 2.249 2.66 2.91 16377 2 2.900 1.844 3.300 2.249 2.66 2.91 16377 2 2.900 1.844 3.300 2.249 2.66 2.91 16377 2 2.900 1.844 3.300 2.249 2.66 2.91 16377 2 2.900 1.844 3.300 2.249 2.66 2.91 174.477		00	2.925	1.874	-	3.050	1.999	CV	2.39	2.081	32	207	082
27 2.950 1.877 1 3.000 1.949 3 2.45 2.141 33242 10 2.955 1.874 3 3.000 1.949 2 2.545 2.714 33242 11 2.295 1.874 3.000 1.949 2.554 2.531 33244 11 2.295 1.874 3.000 1.949 2.024 2.556 2.771 54377 11 2.295 1.877 2.024 2.249 2.556 2.771 54377 2.444 2.300 1.949 3.000 1.949 3.000 2.249 6 2.66 2.771 32372 2.249 2.074 2.024 2.074 2.024 2.075 2.074 2.024 2.075 2.074 2.074 2.024 2.075 2.074 1.074 2.300 2.249 2.075 2.074 1.074 2.300 2.249 2.075 2.074 1.074 2		20	2.912	1.861	10	3.050	1.999		2.44	2,131	17	270	132
3 2,375 1,874 3 9,000 1,949 2,54 2,231 33 -397 10 2,295 1,874 3,079 2,024 2,58 2,271 54 -397 24 2,935 1,837 3,079 2,024 2,59 2,891 37 -4,14 8 3,000 1,949 2,49 2,59 2,891 47 -4,14 8 3,000 1,949 3,400 2,349 6 2,66 2,901 47 -4,14 29 3,100 2,349 6 2,66 2,971 32 -372 29 3,005 2,249 6 2,66 2,971 45 -372 29 3,007 2,249 6 2,66 2,971 45 -372 29 3,007 2,249 2,64 2,971 45 -377 29 3,007 2,249 2,64 2,991 45 -377 2,		27	2,950	1.899	-			67	2.45	2.141	33	242	
10 2.955 1.877 54 -397 24 2.972 1.861 2.975 2.024 2.58 2.271 54 -397 1 2.938 1.837 3.075 2.024 2.58 2.271 54 -397 1 2.930 1.847 3.075 2.024 2.56 2.291 17 -4.44 28 3.000 1.849 3.400 2.349 6 2.65 2.311 54 -372 29 3.125 2.074 3.300 2.349 6 2.68 2.91 45 -372 29 3.075 2.044 3.300 2.249 2.68 2.91 16 -377 2 2.925 1.874 3.300 2.249 2.67 2.381 16 -377 2 2.925 1.874 3.300 2.249 2.64 2.311 17 -4.472	9	er	2.925	1.874	600	3.000	676°1		2.54	2.231	33	357	232
17 2.883 1.837 3.075 2.024 2.59 2.881 47 -4/44 24 2.912 1.861 2.024 2.66 2.291 47 -4/44 1 2.932 1.837 3.400 2.346 2.291 39 -4/44 15 3.000 1.949 3.400 2.349 6 2.66 2.331 54 -372 22 3.125 2.049 3.349 6 2.66 2.331 32 -372 29 3.075 2.044 3.390 2.249 2.67 2.881 16 -357 20 3.500 2.249 2.67 2.881 16 -357 20 1.829 3.300 2.249 2.67 2.881 16 20 1.829 3.300 2.249 2.63 2.351 17 -462	2	10	2.925	1.874					2.58	2.27	54	397	
24, 2.912 1.861 2.60 2.891 39 -4430 1 2.998 1.887 2.60 2.391 39 -4434 15 3.000 1.949 3.400 2.349 6 2.66 2.371 34 -372 -3		17	2.833	1.837		3.075	2.024		2.59	2.281	1.7	41/7-	257
1 2.938 1.837 2.400 2.349 2.60 2.391 17 4.44 18 3.000 1.949 3.400 2.349 6 2.66 2.371 32 -322 22 3.125 2.074 3.350 2.289 6 2.66 2.971 32 -322 29 3.075 2.044 3.300 2.249 2.66 2.331 45 -317 3 3.075 3.200 2.249 2.64 2.331 6 -4.77 12 2.900 1.829 2.464 2.331 17 -4.92 12 2.900 1.829 2.464 2.331 17 -4.92		24	2.912	1.861					2.60	2.291	33	430	
8 3,000 1,949	A	Pred.	2.938	1.837					2,60	2.301	17	414	
15 3.100 2.045 3.400 2.349 6 2.66 2.371 32322 22 3.315 2.044 3.300 2.289 6 2.66 2.371 32332 3.5 3.075 2.024 3.300 2.289 2.66 2.391 16337 3.5 3.075 2.024 3.300 2.249 2.67 2.391 16357 3.5 3.2 2.301 1.849 2.391 17452 3.341 17452		100	3,000	676°T				10	2.63	2.331	54	332	
22 3,125 2,074 3,350 2,239 2,68 2,391 45 -317 -317 2,50 3,075 2,024 3,300 2,249 2,64 2,351 16 -357 -317 12 2,900 1,829 3,300 2,249 2,65 2,341 17 -4,622		32	3,100	2.079		3.400	2.349		2.66	2.371	32	322	022
29 3.075 2.024 3.300 2.249 2.67 2.83 16357 - 5 2.925 1.874 3.300 2.249 2.64 2.351 204.77 - 12 2.900 1.829 3.300 2.249 2.65 2.341 174.62		22	3,125	2.07%		3.350	2.299		2.68	2.391	45	317	092
5 2,925 1,874 3,300 2,249 2,64 2,351 20 -4,77 - 12 2,900 1,849 3,300 2,249 2,65 2,341 17 -4,92		8	3.075	2.024		3,300	2,279		2.67	2.381	16	357	132
12 2.900 1.849 3.300 2.249 2.63 2.341 17492		w	2,925	1.874		3,300	2.249		2.64	2.351	20	TT.710-	102
		12	2,900	1.849		3,300	2.279		2.63	2.341	17	492	092

\$2.925 \$1.874 \$3.290 \$2.199 \$2.24 13 \$-367 \$2.925 \$1.874 \$3.290 \$2.199 \$2.24 130 \$2.927 \$1.901 \$2.925 \$1.874 \$3.290 \$2.199 \$2.24 1301 \$2.8 \$-1.57 \$2.925 \$1.874 \$3.290 \$2.199 \$2.24 1.901 \$3. \$2.927 \$1.901 \$3. \$-1.97 \$2.925 \$1.874 \$3.290 \$2.074 \$3 \$2.15 \$1.831 \$1.83 \$1.837 \$2.925 \$1.874 \$3. \$3.125 \$2.074 \$3 \$2.15 \$1.831 \$1.83 \$1.837 \$2.925 \$1.931 \$3. \$-0.022 \$2.950 \$1.931 \$3. \$2.950 \$1.931 \$3. \$2.950 \$1.931 \$3. \$2.950 \$1.931 \$3. \$2.950 \$1.931 \$3. \$2.950 \$1.932 \$2.950 \$1.939 \$2.27 \$1.951 \$3. \$2.950 \$1.939 \$2.20 \$2.20 \$1.931 \$3. \$2.950 \$1.939 \$2.27 \$1.950 \$3. \$2.950 \$1.939 \$2.27 \$1.950 \$3. \$2.950 \$1.939 \$2.27 \$1.950 \$3. \$2.950 \$1.939 \$2.27 \$1.950 \$3. \$2.950 \$2.950 \$1.939 \$2.27 \$2.950	Receipter's Actually Net-1 a 3.256 \$2.199 3.256 \$2.199 3.125 \$2.074 3.125 \$2.074 3.125 \$2.074 3.206 11.399 2.950 1.399	s Cash	Cash Price :	Carlot :	Cash Price	Price :	Carlot	r Cash	Price :	Carlot	2	(3)
\$2,925 \$1,874 \$3,250 \$2,199 \$2,34 \$2,241 13 \$4,267 \$2,925 \$1,874 \$3,250 \$2,199 \$2,34 \$2,241 13 \$4,267 \$2,925 \$1,874 \$3,250 \$2,199 \$2,34 \$2,241 13 \$4,267 \$2,925 \$1,874 \$3,250 \$2,097 \$2,241 1,901 30 \$4,267 \$2,925 \$1,937 \$2,900 \$1,939 \$2,241 \$1,901 30 \$4,267 \$2,900 \$1,939 \$2,240 \$2,900 \$1,939 \$2,240 \$2,900 \$1,939 \$2,240 \$2,900 \$1,939 \$2,240 \$2,900 \$1,939 \$2,240 \$2,900 \$1,939 \$2,240 \$2,900 \$2,900 \$1,939 \$2,240 \$2,90	\$2,925 \$1,874, \$3,290 \$2,199 2,925 \$1,874, \$3,290 \$2,199 2,925 \$1,874, \$3,290 \$2,199 2,925 \$1,874, \$3,290 \$2,199 2,925 \$1,874, \$3,290 \$2,094 2,926 \$1,931 2,926 \$1,931 2,926 \$1,934 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,927 \$2,034 2,928 \$2,006 2,938 \$2,0	g s Actual	s liet s	Receipts2:	Actuals			2 Actual			Calif.:	Wash.
\$2,925 1.874 \$3.250 \$2.199 \$2.24 2.034 1.13 \$-157 \$2.925 1.874 1.13 \$-157 \$2.925 1.874 1.13 \$-157 \$2.925 1.874 1.13 \$-157 \$2.925 1.874 1.13 \$-157 \$2.925 1.874 1.13 \$2.925 1.874 1.13 \$2.925 1.874 1.13 \$2.925 1.874 1.13 \$2.925 1.874 1.13 \$2.925 1.874 1.13 \$2.925 1.874 1.13 \$2.925 1.935 2.074 2.225 1.935 1.13 \$2.925 1.935 2.035 1.935 2.035 1.935 2.035 1.935 2.035 1.935 2.035 1.935 2.0	2,395 81,874, \$2,395 82,199 2,395 11,874, \$3,290 2,199 2,395 11,874, \$3,290 2,199 2,395 11,874, \$3,290 2,199 2,395 11,874, \$3,125 2,074, \$2,395 2,395 11,899 2,395 2,034, \$3,000 11,399 2,395 11,937, \$3,000 11,349 2,395 2,034, \$2,950 11,939 2,395 2,034, \$2,950 11,939 2,395 2,034, \$2,950 11,939 2,395 2,034 2,395 2,038 2											
2.912 1.874 3.290 2.199 2.27 1.961 3.8 -1.57 2.912 1.864 3 2.199 2.27 1.961 3.8 -1.67 2.925 1.874 3 2.125 2.074 3 2.27 1.961 3.8 -1.67 2.925 1.874 3 3.125 2.074 3 2.27 1.961 1.991 1.901 2.925 1.911 3.105 2.074 2 2.26 1.991 1.69 1.092 2.926 1.931 3.000 1.949 3 2.28 1.991 1.69 1.092 2.928 1.934 2.990 1.999 2.27 1.951 137 -1.022 2.935 1.934 2.990 1.999 2.27 1.961 87 4.083 2.930 1.945 2.990 1.999 2.27 1.961 87 4.083 2.930 2.048 2.091 2.090 1.999 2.27 1.961 37 -1.052 2.935 1.935 2.036 2.038 2.036 2.031 30 -1.052 2.935 2.036 2.038 2.036 2.038 2.036 1.993 2.039 2.0	2.955 1.874, 3.259 2.955 1.874, 3.259 2.955 1.874, 3.150 2.955 1.874, 3.150 2.956 1.999 3.125 2.074 2.956 1.999 3.125 2.074 2.957 1.991 3.000 1.999 3.000 1.999 2.995 1.999 2.995 1.999 2.995 2.034 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038 2.950 2.038	-			\$3,250	\$2,199		\$2.53	\$2,241	13	\$367	\$00
2.925 1.874 3.159 2.039 2.23 1.901 36045 2.925 1.874 3.125 2.074 3 2.13 1.901 36045 2.925 1.874 3 3.125 2.074 3 2.15 1.901 36045 2.926 1.939 3.125 2.074 2 2.26 1.931 1.55025 2.926 1.931 3.000 1.949 3 2.26 1.931 1.37022 2.926 1.931 2.000 1.949 3 2.26 1.931 1.37022 2.927 1.932 2.034 2.950 1.939 2.27 1.951 1.34037 2.927 1.932 2.034 2.930 1.939 2.27 1.961 88 7.663 2.935 1.935 2.034 2.035 2.034 2.031 3.0037 2.936 2.038 2.036 2.038 2.036 2.031 2.0037 2.937 2.038 2.036 2.038 2.036 2.031 1.000 2.031 1.000 2.938 2.036 2.038 2.036 2.038 2.036 1.946 2.031 1.000 2.938 2.036 2.038 2.036 2.039 2.030 1.966 6 7.003 2.938 2.036 2.038 2.036 2.039 2.039 2.030 1.966 1.966 2.030 2.	2,975 1,874, 3,125 2,079 2,975 1,874, 3,125 2,077 2,975 1,874, 3 1,25 2,077 2,990 1,999 3,125 2,074 2,990 1,999 3,125 2,074 2,990 1,999 3,125 2,074 2,095 2,074 3,000 1,999 2,997 2,074 2,990 1,999 2,997 2,074 2,990 2,997 2,074 2,990 2,998 2,006 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,006 2,007 2,007 2,006 2,007 2,007 2,006 2,007 2,007 2,007 2,006 2,007 2,				3.250	2,199		2.34	2.031	230	157	-,166
2.972 1.861 1 3.125 2.074 3 2.15 1.901 190040 2.972 1.874 3 3.125 2.074 2 2.15 1.951 190040 2.972 1.874 3 3.125 2.074 2 2.15 1.951 155052 2.972 1.971 3.000 1.949 2.291 1.971 124002 3.000 2.034 2.990 1.899 2.27 1.971 124002 3.000 1.949 2.990 1.899 2.27 1.971 124002 3.000 1.940 2.090 1.899 2.27 1.971 124002 2.972 2.972 2.013 2.020 1.899 2.27 1.971 124002 2.972 2.972 2.013 2.020 1.899 2.27 1.971 10052 2.972 2.013 2.020 1.899 2.27 1.960 1.972 2.003 2.972 2.973 2.003 2	2,932 1,841 1 3,125 2,074, 2,955 1,874 3 3,125 2,074, 2,956 1,899 3,125 2,074, 2,956 1,899 3,125 2,074, 2,966 1,999 3,125 2,074, 2,966 1,999 3,125 2,074, 2,966 1,999 3,125 2,074, 2,996 1,999 2,996 1,999 2,990 2,013 3,005 2,990 1,999 2,990 2,013 3,25 2,096 2,995 2,096 2,998 2,096 2,098 2,				3,150	2,099		2.27	1,961	38	087	4.138
2,995 1,974 3 3,125 2,074 2 2,16 1,635 1,635 4,023 2,966 1,995 3,125 2,074 2 2,26 1,931 155 4,023 2,966 1,991 3,000 1,949 3 2,26 1,931 137 1,022 2,966 1,991 3,000 1,949 3 2,26 1,991 137 1,022 2,992 1,995 1,995 2,27 1,961 88 4,004 2,992 1,995 2,27 1,961 88 4,004 2,993 1,995 2,27 1,961 88 4,004 2,993 2,29 1,995 2,29 1,995 2,29 1,996 2,993 2,29 1,996 2,993 2,003 2,993 2,003 2,993 2,003 2,993 2,003 2,993 2,003 2,003 2,993 2,003 2,003 2,993 2,00	2,995 1,874, 3 3,125 2,074, 2,296 1,899 2,125 2,074, 2,296 1,999 3,125 2,074, 2,296 1,999 3,125 2,074, 2,296 1,999 3,125 2,074, 2,296 1,999 3,125 2,074, 2,296 1,999 2,996 2,996 2,996 2,998 2,006 2,006 2,0			rel	3.125	2.074	3	2.21	1.901	06	070	4.17
2,950 1,899 3,125 2,074 2 2,26 1,951 155052 2,950 1,999 3,125 2,074 2 2,26 1,951 155052 2,950 1,999 3,125 2,074 2 2,26 1,951 137022 2,950 1,999 2,22 1,921 124010 2,990 1,999 2,22 1,991 124010 2,990 1,999 2,22 1,991 124010 2,991 1,992 2,992 1,991 2,292 1,991 2,292 1,991 2,292 1,991 2,292 1,992 2,292 1,991 2,292 1,992 2,292	2.950 1.899 3.125 2.074 2.950 1.999 3.125 2.074 2.950 1.991 3.000 1.949 2.958 1.937 2.034 2.950 1.937 2.990 1.939 2.990 2.013 2.990 2.013 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018 2.990 2.018			m	3.125	2.074	m	2,16	1.851	163	4.023	4.223
2.966 1.999 3.125 2.074 2 2.22 1.931 137022 2.968 1.931 137022 2.968 1.931 2.000 1.949 3 2.23 1.931 137022 2.968 1.931 2.000 1.949 3 2.23 1.931 137022 2.000 1.949 3 2.23 1.931 137022 2.000 1.949 2.000 1.940	2,956 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 1,999 9,200, 2,998 2,006 2,006 2,				3.125	2.074	C.	2,26	1.951	155	052	4.123
2.968 1.991 3.000 1.949 3 2.26 1.921 124 - 0.00 2.968 1.937 3.000 1.949 3 2.26 1.921 124 - 0.00 3.968 2.034 2.039 1.899 2.28 1.971 124 - 0.00 2.969 1.934 2.990 1.899 2.28 1.971 124 - 0.00 2.950 1.942 2.990 1.899 2.28 1.971 130 1.971 2.950 2.013 2.004 2.001 1.903 1.903 1.903 1.903 1.903 1.903 2.950 2.018 2.990 1.990 1.990 1.990 1.900 1	2,962 1,911 3,000 1,369 2,098 1,097 3,000 1,369 3,008 2,004 2,095 1,099 1,099 2,095 1,099 1,099 2,095 1,099 1,099 1,099 1,099 2,095 2,099				3.125	2.074	01	2.24	1.931	137	022	4.143
2.968 1.937 2.968 1.957 84 -0.04 3.095 2.034 2.950 1.399 2.28 1.977 84 -0.04 3.000 2.034 2.990 1.399 2.27 1.961 87 4.063 3.000 1.942 2.990 1.399 2.27 1.961 87 4.063 3.000 1.942 2.990 1.399 2.27 1.961 87 4.063 3.000 1.945 2.990 1.399 2.27 1.961 87 4.063 2.397 2.397 2.013 2.40 2.013 37 -1.67 2.395 2.029 2.018 2.40 2.091 10 -1.052 2.398 2.006 2.018 2.40 2.091 10 -1.052 2.398 2.006 2.018 2.40 2.091 10 -1.052 2.398 2.006 2.018 2.40 2.091 10 -1.052 2.398 2.006 2.018 2.40 2.091 10 -1.052 2.398 2.006 2.018 2.40 2.096 16 -1.068 2.390 1.968 2.391 1.996 6 4.012 2.390 1.968 2.391 1.996 6 4.012	2.998 1,937 3,000 1,949 3,000 1,949 3,000 1,949 2,000				3.000	1.949	m	2.23	1.921	124	- 010	4.028
3,085 2,034 2,990 1,999 2,27 1,971 85 4,083 2,290 1,972 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,27 1,961 30 2,097 2,297 2,	2,005 2,004, 2,950 1,899 3,100 2,004, 2,950 1,899 2,905 1,996 2,997 2,003 2,996 2,003 2,996 2,003 2,996 2,003 2,996 2,004 2,998 2,006 2,998 2,006 2,998 2,006 2,998 2,006 2,998 2,006 2,998 2,006 2,998 2,006 2,998 2,006				3.000	1.949		2.26	1.951	**	014	00
2.950 1.994 2.27 1.964 87 7-088 2.905 1.994 2.27 1.995 2.27 1.995 2.27 1.995 2.27 1.996 2.097 2.20 2.20 2.20 2.20 2.20 2.20 2.20 2.2	2,950 1,934 2,900 1,934 2,900 1,934 2,900 2,013 2,900 2,013 2,900 2,018 2,900 2,018 2,900 2,018 2,900 2,018 2,900 1,968 2,900 1,968				2.950	1.899		2.28	1.971	55	4.063	07
2,995 1,934 2,34 2,013 30 2,912 1,934 2,240 2,031 30 2,912 1,956 2,032 2,031 37 2,950 2,013 2,013 2,013 2,013 2,013 2,950 2,018 2,095 2,091 10 2,995 2,018 2,095 2,091 10 2,995 2,003 1,996 2,038 1,996 15 2,990 2,004 2,005 1,996 1	2.995 1.934. 2.995 1.934. 2.905 1.994. 2.907 2.064. 2.907 2.093 2.907 2.093 2.908 2.006 2.908 2.006 2.908 2.006 2.908 1.903 2.908 1.908				2.950	1.899		2.27	1.961	87	×.088	06
2,000 1,949 2,440 2,091 32 2,813 1,946 2,091 37 2,851 1,946 2,091 37 2,950 2,018 2,006 1,948 2,400 2,091 10 2,950 2,018 2,006 1,948 2,400 2,091 10 2,950 2,018 2,006 1,948 2,400 2,098 15 2,950 2,018 2,006 1,948 2,400 2,098 15 2,950 1,968 2,006 1,968 2,006 1,968 2,400 1,968 8 2,970 1,968 2,006 1,968 2,400 1,968 8 2,970 1,968 2,006 1,968 2,400 1,968 8 2,970	2,000 11,30,9 2,812 1,936 2,812 1,936 2,957 2,013 2,957 2,013 2,957 2,013 2,957 2,013 2,957 2,006 2,958 2,006 2,958 2,006 2,958 2,006 2,958 2,006 2,978 1,968 2,970 1,968							2.34	2.031	30	097	
2,912 1,990 2,441 2,101 37 2,812 1,990 2,441 2,101 37 2,875 1,995 2,013 2,243 2,243 2,243 2,243 2,243 2,243 2,243 2,243 2,243 2,295 2,095 2,095 2,995 2,095 2,095 2,995 2,095 2,095 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005 2,995 2,005	2,872 1,980 2,875 1,960 2,875 1,975 2,970 2,013 2,970 2,018 2,970 2,038 2,970 2,038 2,970 2,038 2,970 2,038 2,970 1,968 2,875 1,968 2,875 1,968							2.40	2.091	32	142	
2.875 1.956 2.43 2.122 30 2.875 1.956 2.013 2.001 22 2.875 2.013 2.002 2.003 1.597 2.970 2.018 2.005 1.598 1.596 2.970 2.018 2.005 1.598 2	2.885 1.956 2.8875 1.943 2.950 2.013 2.955 2.004 2.950 2.018 2.950 2.006 2.950 2.006 2.950 1.968 2.950 1.968							2.41	2.101	37	121	
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Care Price Carior		: Calif	- 1		: Machington				Kensas City	to food	Differential	tial.
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12 2.665 1.739 1 2.18 1.856 28 -1.137 26 2.575 1.689 4 2.20 1.876 28 -1.137 2 2.575 1.689 4 2.21 1.886 27 -1.137 3 2.575 1.689 2 2.21 1.886 27 -1.137 4 2.575 1.669 2 2.21 1.886 27 -1.17 3 2.605 1.774 1 2.900 1.778 2.21 1.886 27 -1.17 4 2.575 1.669 2.938 1.836 8 2.21 1.886 30 -1.17 4 2.550 1.664 2.938 1.836 6 2.26 1.17 -1.17 1 2.550 1.664 2.938 1.836 6 2.26 1.17 -1.17 1 2.550 1.644 2.835 1.722 2.20 1.17 1	v							2.26	1.936	37		
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1,	0 10	2.575	1.699				2	2.19	1.866	27	177	
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1 2.575 1.669 2.925 1.822 8 2.50 1.676 31 186 1 2.550 1.664 2.975 1.873 2.25 1.936 42 262 2 2.550 1.664 2.975 1.873 2.25 1.936 42 275 3 2.550 1.664 2.975 1.873 2.25 1.936 42 275 1 2.550 1.644 2.975 1.873 2.11 1.776 17 162 1 2.550 1.644 2.875 1.677 2.91 1.776 17 1.172 1.	30	2,600	712-1	-	2,900	1.793		2.19	1.866	31	152	068
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28 2.575 1.674 2.975 1.673 2.25 1.926 42 -262 4 2.500 1.644 2.925 1.823 2.10 1.776 17 -162 118 2.500 1.644 2.785 1.773 2.11 1.776 16 17 1.176 17 -172 118 2.500 1.644 2.785 1.677 1.871 1.776 17 -176 1.77 1.176 1.77 1.176 1.77 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.176 1.17 1.179 1.179 1.179 1.179 1.179 1.179 1.179 1.179 1.179 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176 1.176	21	2.550	1.664		2.975	1.873		2.26	1.936	77	272	063
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11		2,500	1.614		2.925	1,823		2.10	1.776	31	162	4.047
18		2.500	1.614		2.850	1.746		2,11	1.786	17	172	070-
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29 2.325 1.439 2 2.450 1.307 1.62 1.285 181 4.154 6 2.350 1.464 3 2.450 1.307 1.71 1.73 1.93 4.220 13 2.325 1.464 4 2.450 1.307 1.90 1.565 76101 27 2.350 1.464 4 2.450 1.307 1.60 1.565 81 4.199 3 2.37 1.489 14 2.450 1.307 1.60 1.385 334 4.204	22	2.375	1.439		2.500	1.357	m	1.65	1,315	65	4.174	4.042
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1,489 14 2,450 1,307 1,62 1,285 337 7.204	Nov 3			13				1.69	1.355	334		
	10	2,375	1.439	77	2.450	1.307		1.62	1.285	337	4.204	4.022

4	asb.		133	200	012	990	038	200
tia	Me		1	r	X	i	i	x
Pifferen	Calif.;		4.024	4.114	7.00%	4.039	4.026	4.109
Carlot s	Rec ipte?		575	392	1,536	1,730	1,070	167
City Price :	Net-		\$1.465	1.375	1.295	1.475	1.495	1.455
Cash	Actual:		\$1,30	1.71	1.73	1.81	1.83	1.79
Carlot :	Receiptser							
ton rice :	Net-		\$1.332	1.382	1.407	1.407	1.457	1.457
Mashin Cash	Actuals		\$2.475	2.525	2.550	2.550	2,600	2.600
Carlot ,	Receipts .		10	22	69	58	Z,	19
rice :	Net- :		\$1.439	1.439	1.489	1.564	1,589	1.564
Califor	Actuals		\$2.375	2,375	2,375	2.450	2.475	2.450
	Ing		17	77	-	00	15	22
Week	Beginn	1957	Nov	276	Dec		200	

lactual cash price minus fraight cost from Group B. (Freight cost used appear in Table 3.) 2 Th number of railroed cure received from Group B. 2 Total received in Kansas City. 2 Group B. 2 Total received in Kansas City. 2 Group B. 2 California and Mashington net eash price above (\neq) or below (-) Kansas City not cash price.

GRAIN SORGHUM MOVEMENTS FROM SOUTHWESTERN KANSAS IN RELATION TO SPATIAL PRICE DIFFERENCES

by

Hosea Snyder Harkness

B. S., Kansas State College of Agriculture and Applied Science, 1957

AN ABSTRACT OF A THESIS

submitted in partial fulfillment of the requirements for the degree

MASTER OF SCIENCE

Department of Economics and Sociology

KANSAS STATE COLLEGE
OF AGRICULTURE AND APPLIED SCIENCE

Kansas farmers have found an increased importance in the utilization of grain sorghums as a cash crop. With this increase has come the need for new markets outside of the producing area. The purpose of this study was to determine whether Kansas sellers were taking advantage of price differences between markets at a given point in time. This study was particularly concerned with the effectiveness with which Kansas grain sorghums were marketed during the period July 1, 1955 to December 31, 1957.

The economic theory was taken that prices of grains vary regionally, because they are chiefly reflecting costs of transportation from producing areas to consuming areas. From this a partial spatial equilibrium problem was set consisting of Kansas as the producing area and of Kansas City, California, and Washington as the consuming areas. A specified producing area was stated for Kansas which was an area south of a line from Salina through Goodland, and west of a line from Salina through Wichita. This area included two of the four transcontinental freight rate groups in Kansas.

Terminal market prices for grain sorghums were taken from Kansas City and Los Angeles, while prices for Seattle were from the Seattle Grain Exchange. These prices represented one day in each week, therefore, all other data used was broken down into periods of 131 weeks. To put these prices on an equal basis the transportation costs from the two transcontinental freight rate groups used in Kansas, referred to by the author as Groups B and C, were subtracted from the actual Los Angeles and Seattle cash price to give a net cash price. Freight rates from Garden City in Group B, and Salina and Wichita in Group C were used to obtain the Kansas City net price.

To find a price differential the Kansas City net price was subtracted from the Los Angeles and Seattle net price. This differential then gave a margin for the two western markets above or below the Kansas City net price. For the remainder of the study Los Angeles terminal market price was referred to as the California price and Seattle Grain Exchange price as the Washington price.

The equilibrium was not found in the market for grain sorghums shipped out of Kansas. Wide fluctuations were found between the California - Washington markets compared to Kansas City. An extreme example was when California price differential ranged from 43.0 cents below to 42.9 cents above Kansas City price during the 30 month period studied for Group B.

Movement of grain sorghums from Kansas was then compared to these price differentials. Source of movements were obtained from European corn borer certificates which are issued by the Kansas Entomological Commission to all shipments of grain sorghums moving from Kansas to eight Western states.

Carlot receipts in Kansas City were taken from the Kansas City Grain Market Review and were assumed from a previous study to be mainly from the area studied in Kansas.

Ninty-seven and six-tenths percent of the movement to California from freight rate Group B in Kansas was made when price conditions were favorable in California over Kansas City. Therefore, it appeared that the Kansas seller was taking advantage of this market when price was favorable.

It appeared that all shipments, from Group B to California and Washington, made when these states were at a price disadvantage were caused by a lag in shipments compared to price. Movements made to Washington when no cash price was reported might have been on a contract basis, since this movement seemed not to be accounted for by a lag in the market.

For shipments designated from Group C to Washington and California the full advantage of cash prices seemed not to be taken. Of the 33.0 percent of the total shipments made during a price disadvantage to California 96.5 percent were made when California had held a negative price differential

for five or more successive weeks. One hundred percent of the 179 cars shipped to Washington at a price disadvantage were also during a period of five or more successive weeks when Washington held a negative price differential with Kanses City. Therefore, the shipments which moved under a price disadvantage appeared not to be caused by a lag in the shipments compared to price.

Carlot receipts of grain sorghums in Kansas City which were assumed to be from the main producing area of Kansas were not affected during the periods of favorable prices in California and Washington,

There were many weeks when California and Westington held a price advantage, but there was no movement to these states. The price differential, therefore, suggested that greater quantities of grain sorghums should have moved to California and Washington (relative to movement to Kansas City) if the greatest opportunities for profit had been realized. Even though the Kansas sollers have not taken full advantage of the California and Washington markets in all cases this does not fully support the original assumption that these markets should have an effect upon the number of carlot receipts in Kansas City.

The lowest and highest price differentials for California and Washington over Kansas City for Groups B and C occurred during similar periods of time. Possible reasons for this could have been changes in price in one area (Kansas City) in expectation of the coming crop which were not reflected to the West Coast markets immediately. Also, the problem of grain sorghums in picking up moisture while in storage may have limited shipments to the West Coast.